

# Experimental Study on the Un-Propped Fracture Conductivity of Shale in Southern Sichuan

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**Abstract:** Hydraulic fracturing is the key technology of shale oil and gas development. How to accurately evaluate the conductivity of local un-propped fractures in shale reservoir after fracturing will have an important impact on the formulation of fracture network fracturing scheme and productivity prediction after fracturing. In this paper, the un-propped fracture conductivity was tested by using Longmaxi formation shale reservoir in South Sichuan, and the main influencing factors were analyzed. The results show that the fracture must shear slip to provide effective conductivity. Due to different lithology, the un-propped fracture conductivity may differ by more than 2 orders of magnitude. Under low closure stress, rock samples with high roughness are easy to obtain high conductivity; and under high closure stress, Young's modulus have a good correlation and positive correlation with conductivity. Closure stress is the key factor affecting the un-propped fracture conductivity. The conductivity decreases exponentially with the increase of closure stress, and the higher the closure stress, the easier it is for gas flow in fractures to reach non-Darcy flow.

**Keywords:** shale oil, Hydraulic fracturing

## 1. INTRODUCTION

China's recoverable shale gas resources amount to  $25.08 \times 10^{12}$  m<sup>3</sup> (Wei et al., 2021), with broad prospects. At present, from the perspective of reservoir quality, the most potential and representative is the marine Longmaxi formation shale in the south of Sichuan Basin (Nie et al., 2020; Xiao et al., 2021). Hydraulic fracturing is the key technology for the development of shale gas reservoir (Xu et al., 2021). In the fracture network after fracturing, the fractures after shale fracturing are divided into propped fractures paved with proppant and un-propped fractures generated by shear slip of rough fracture surface (Zhang et al., 2015; Tan et al., 2018). Among them, un-propped fracture is the main body of fracture network, and its seepage capacity has an important impact on productivity (Zhang et al., 2014). Fredd et al. (2000), Hill et al. (2007), Zhang et

al. (2014) compared the differences between un-propped fractures and propped fractures, and carried out research on influencing factors such as stress, mechanical characteristics and fluid type. Jansen et al. (2015), Wang & Sharma et al. (2018) carried out the pilot test of new support mode, but the action mechanism and applicability of shale gas are still unclear. In this paper, the influence factors of un-propped fracture conductivity under the action of shear slip is tested and analyzed by using the shale outcrop in southern Sichuan, which provides a basis for the optimal design of maintaining the conductivity of shale fractures.

## 2. TEST METHODS

Based on the study of fissure flow, non-Darcy effect and gas slippage effect, a gas measurement conductivity calculation model suitable for slick water fracturing un-propped fractures in shale gas reservoir was established in this paper (Wu et al., 2018). The rough displaced rock samples were made from shale outcrop and tested by fracture conductivity test system.

### 2.1 Rock samples preparation

The rock samples used in the experiment in this paper are collected from the fresh outcrop section of Wufeng Formation of Upper Ordovician and Longmaxi formation of Lower Silurian in Changning County, Sichuan Basin. The mineral composition of 7 groups of rock samples were measured by X-ray diffraction (XRD) analysis to be 22.42% clay, 21.26% carbonatite, and 55.43% feldspar and pyrite (by weight).

### 2.2 Gas conductivity model

There is no proppant in un-propped fracture, which is formed by shear slip of rough wall. The flow of natural gas in the fracture belongs to fissure flow, and its seepage resistance is lower than that in porous medium. There is an obvious non-Darcy phenomenon with the increase of flow. In this paper, the cubic law, non-Darcy effect and slippage effect are introduced into Darcy formula (Ranjith & Viète, 2011), and the calculation model of conductivity of un-propped fractures is established:

$$F_{CD} = \frac{ZRT \mu L \rho_p Q_p}{M \omega \Delta p \bar{p}} \left[ \frac{1}{(1+b/\bar{p})} + \frac{\beta b_h}{12} \left( \frac{\rho_p Q_p}{\mu \omega} \right) \right] \quad (1)$$

Where  $\rho_p$  is the gas density in conductivity cell; Z is the gas compression factor;  $\mu$  is gas viscosity, M is the molar mass (28 g/mol for nitrogen); R is the general constant of gas (the value is 0.008314);  $\omega$  is the fracture width (3.81 cm for API conductivity cell); T is the temperature;  $b_h$  is the hydraulic equivalent fracture width of un-propped fracture; b is gas slippage factor;  $\beta$  is non-Darcy coefficient.

3. E PARAMETER

This paper describes the seepage in un-propped fractures by quoting the e parameter representing non-Darcy effect to better study the seepage characteristics of un-propped fractures (Zeng & Grigg, 2006).

In the study, e parameter was introduced to determinate the flow pattern in un-propped fracture. The physical meaning of e parameter is the ratio of the resistance caused by non-Darcy effect to total seepage resistance. The specific calculation formula of e parameter in un-propped fracture is:

$$e = \frac{\frac{\beta}{b_h^2} \left( \frac{\rho_p Q_p}{\mu \omega} \right)}{\frac{ZRT \mu L \rho_p Q_p}{M \omega \bar{p}^2}} = \frac{\beta ZRT L \rho_p^2 Q_p^2}{b_h^2 M \omega^2 \bar{p}^2}$$

(2) Compared with Reynolds number, e parameter has clearer definition and wider applicability. Similarly, e parameter can be used to determine the seepage resistance. When the e parameter reaches 0.1, it is the critical point for the fluid to change from Darcy flow to non-Darcy flow.

4 RESULTS AND DISCUSSION

4.1 Influencing Factors of un-propped fracture conductivity

4.1.1 Effect of closure stress

Figure 1 shows the un-propped fracture conductivity and hydraulic equivalent fracture width at different closure stress and comparison with aligned fracture. For aligned fracture, the initial fracture conductivity at 1.725MPa is only 2.3  $\mu\text{m}^2 \cdot \text{cm}$  and when the closure stress exceeds 10MPa, the conductivity remains tiny, which means the aligned fracture cannot provide sufficient conductivity. When the fracture displaces, the un-propped fracture conductivity is significantly improved, which is more than two orders of magnitude higher than that of aligned fracture.

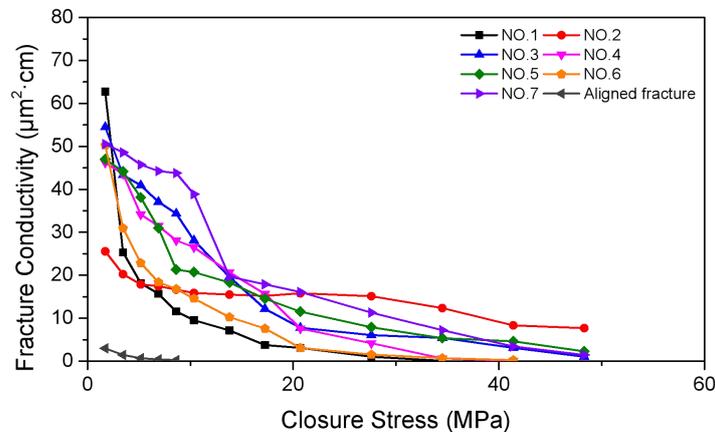


Figure 1. Variety of fracture conductivity under different closure stress

With the increase of closure stress, the un-propped fracture conductivity decreases gradually, but when the closure stress exceeds 17.25 MPa, the influence of closure stress on fracture conductivity will gradually decrease exponentially. This is because under low closure stress, the fracture surfaces are supported in point shape, and the seepage channel has good connectivity, wide fissure and large initial conductivity. However, due to the less contact area between the fracture surfaces, the local stress distribution on each micro bump is larger. With the increase of closure stress, the bumps will soon be deformed and fractured, resulting in the rapid reduction of the fracture width, resulting in a strong

stress sensitivity of conductivity. After the closure stress exceeds 17.25 MPa, the fracture surface is seriously compacted, and the contact area between fracture surfaces increases, the local stress distributed on each bump is relatively small, the fracture width decreases with the increase of closure stress, and the influence of closure stress on conductivity reduces.

In addition, due to different lithology, coupling degree and other factors, the difference of conductivity can reach more than two orders of magnitude. Among them, the conductivity of NO. 1 and 6 shows strong stress sensitivity, while the conductivity of NO. 2 and 7 decreases slowly with the increase of closure stress. When the closure stress

is 34.5 MPa, the maximum conductivity is 12.37  $\mu\text{m}^2\cdot\text{cm}$  and the minimum is only 0.09  $\mu\text{m}^2\cdot\text{cm}$ .

To sum up, fractures must be un-propped through shear slip to provide effective conductivity. However, due to different lithology, coupling degree and other factors, the influence on conductivity under closure stress will be different.

4.1.2 Effect of surface roughness

It can be seen from Figure 2 and Figure 3 that the roughness of un-propped fracture has a certain correlation with its conductivity. Fractures with high roughness are more likely to form larger initial fracture width and higher initial conductivity at 1.725 MPa. However, the conductivity does not increase with the increase of surface roughness, and there is a wide variation range in the relationship between

initial conductivity and roughness. The main reason is that the distribution of surface roughness of rock samples is different, and the coupling degree is different when the roughness is similar, resulting in different conductivity. From Figure 2 and 3, there is no obvious correlation between surface roughness and conductivity under high closure stress. This is because with the increase of closure stress, the micro convex points on the fracture surface are broken, and the contact area and coupling degree are increasing, the contact area and fracture width of different rock samples with roughness become closer, and the influence of roughness on conductivity is obviously weakened. It can be seen that the influence of surface roughness on conductivity is only obvious under low closure stress.

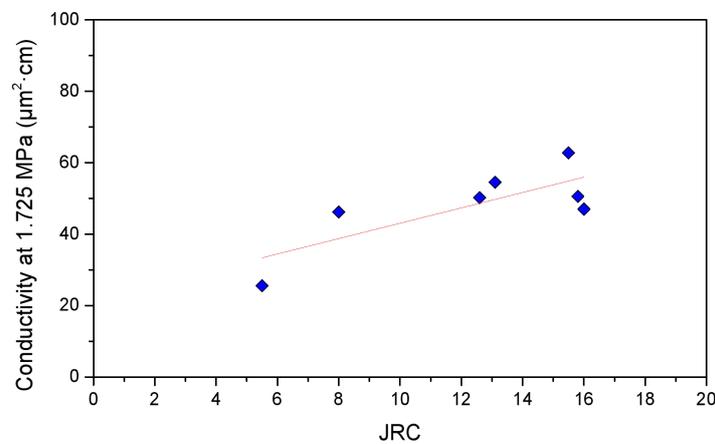


Figure 2. Relationship between conductivity and roughness at 1.725 MPa

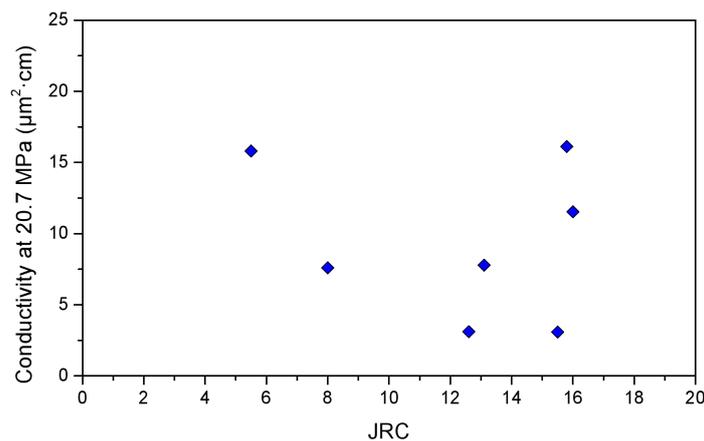


Figure 3. Relationship between conductivity and roughness at 20.7 MPa

4.1.3 Effect of Young's modulus

Under higher closure stress, there is a good correlation between conductivity and Young's modulus (Figure 4). Rock samples with higher

Young's modulus are easy to obtain higher conductivity. Moreover, the difference of conductivity can reach more than two orders of magnitude with different Young's modulus.

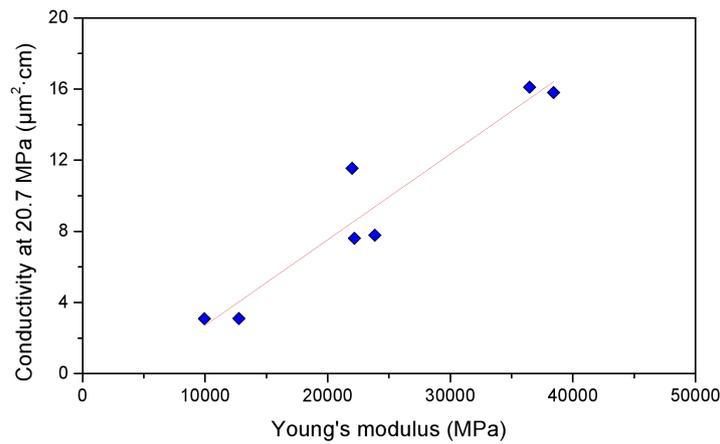


Figure 4. Relationship between Young's modulus and conductivity at 20.7 Mpa

This is because the yield strength of rocks with different Young's modulus is different. The yield strength increases with young modulus. Under the same closure stress, the higher the yield strength, the smaller the micro bump deformation on the fracture surface, the lower the crushing rate and the smaller the reduction of fracture width. Under low closure stress, the un-propped fracture surfaces are point supported, and the conductivity is greatly affected by roughness. With the increase of closure stress, the micro bumps on the fracture wall begin to break, new contact points are emerging, the contact area is increasing, and the contact area of fractures with different roughness becomes close. When the contact

area is close but the strength is different, the deformation and fracture rate of the micro bump on the fracture surface with high Young's modulus will be lower than that of low Young's modulus, so the rock sample with high Young's modulus is easier to maintain a higher fracture width and higher conductivity.

#### 4.2. Analysis of characteristic parameters of un-propped fractures

##### 4.2.1 Slippage factor b

The calculation model of un-propped fractures can be used to calculate the slippage factor of fractures of different rock samples under different closure stress. Figure 5 shows the calculation results.

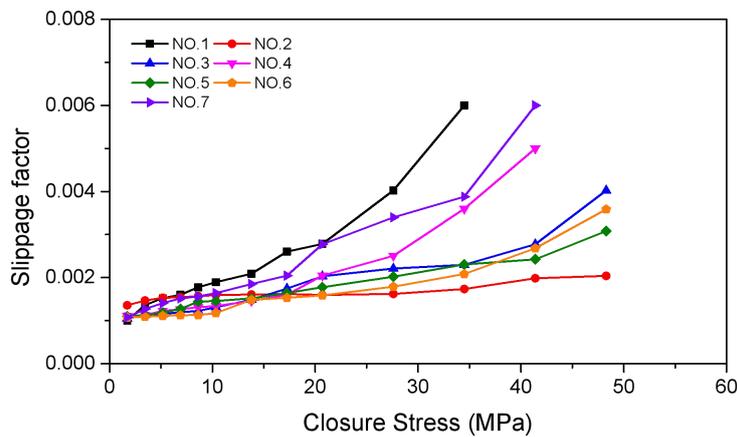


Figure 5. Variation of slippage factor of different samples with closure stress

It can be seen that the gas slippage factor increases with the increase of closure stress. In addition, under the experimental conditions, the maximum slippage factor of most rock samples is below 0.006. That is, when the average pressure in conductivity cell is 0.15 MPa and the gas flows for Darcy, the conductivity caused by slippage effect increases by 4%. This is due to with the increase of closure stress, the fracture width gradually decreases, and the contact area gradually increases. The fluid in the fracture is

limited to flow in several grooves, and the flow situation becomes close to that of fluid in porous media. At this time, the increase of closure stress reduces the roar radius of fluid flow and makes the slippage factor rise gradually. However, compared with porous media, the fracture permeability is several orders of magnitude higher, so in the case of fracture flow, the slippage effect has little effect on conductivity.

4.2.2 Non-Darcy coefficient  $\beta$

According to the calculation model of un-propped fracture conductivity, the main parameters characterizing non-Darcy effect are Non-Darcy coefficient  $\beta$  and e parameter. Coefficient  $\beta$  indicates the influence of closure stress on non-Darcy effect, and the e parameter indicate the influence of test flow on non-Darcy effect under certain closure stress. As can be seen from Figure 6, with the increase of

closure stress, coefficient  $\beta$  is on the rise as a whole. This is because with the increase of closure stress, the fracture width decreases, some areas in the fracture begin to close, the geometric area of fluid flow in the fracture becomes more complex, the bending degree of fluid increases in the flow process, and it will continue to turn, accelerate and decelerate repeatedly, resulting in the increase of non-Darcy factor.

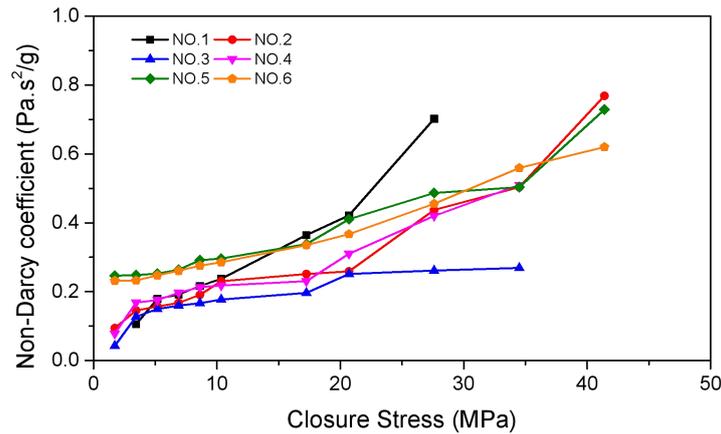


Figure 6. Variation of non-Darcy coefficient  $\beta$  of different samples with closure stress

4.2.3 e parameter in un-propped fracture

As can be seen from Figure 7, with the increase of flow, the ratio of pressure drop caused by non-Darcy effect to total pressure drop is increasing, and the maximum value is close to 50%. In addition, with the increase of closure stress, the ratio of pressure drop caused by non-Darcy effect to total pressure drop is also increasing. It can be seen that the higher the closure stress is, the easier it is to reach non-Darcy

flow. With the increase of closure stress, the fracture width decreases gradually, making greater Coefficient  $\beta$ , and the decrease of fracture width also leads to the acceleration of fluid velocity. At this time, the ratio of pressure drop caused by inertia effect to the total pressure drop increases (i.e. e parameter increase), and the fluid flow is easier to reach non-Darcy flow under the same conditions.

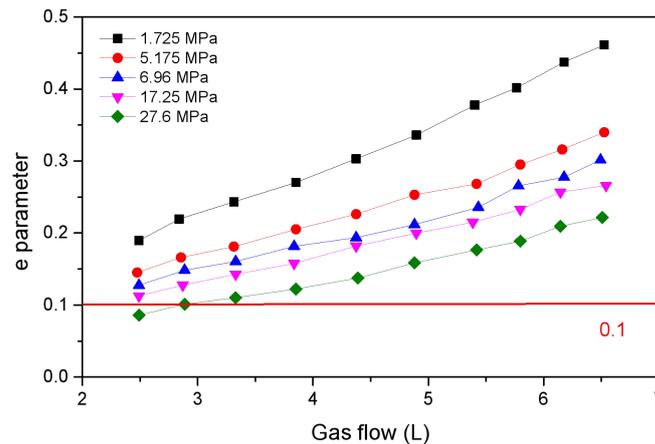


Figure 7. Variation trend of e parameter with flow and closure stress

It can be seen that the closure stress is an important factor affecting the un-propped fracture conductivity. The increase of closure stress not only reduces the absolute permeability of fractures, but also enhances the non-Darcy effect of fractures and further reduces the effective conductivity.

5. Conclusions

In the present study, the un-propped fracture conductivity calculation model is used to test the un-propped fracture conductivity of shale outcrop rock samples of Longmaxi formation in Changning area, Sichuan Province, and the influencing factors of

un-propped fractures are analyzed. The main achievements are as follows:

- (1) The fracture surface cannot form effective conductivity without displaced, and the conductivity will be significantly improved after the relative slip of the fracture surface.
- (2) The closure stress has a great influence on the un-propped fracture conductivity, which decreases exponentially with the increase of closure stress. Moreover, the width of the fracture becomes narrower and the flow channel becomes more complex as closure stress increases. The non-Darcy effect strain of fluid in the fracture becomes stronger, and the effective of un-propped fracture conductivity decreases faster with the increasing of flow.
- (3) Under low closure stress, rock samples with higher roughness are more likely to form wider fracture width and higher conductivity, but there is no direct correlation between roughness and conductivity, and the conductivity is also related to the distribution of fracture surface roughness. Under high closure stress, there is no obvious correlation between roughness and conductivity.
- (4) The impact of gas slippage effect on fracture conductivity is weak, and the influence of inertia effect on fracture conductivity should be mainly considered.

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# On the Application of Interactive Teaching Mode in English Teaching in Colleges

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**Abstract:** The interactive teaching model is a teaching method that is gradually being promoted in modern China. It is different from the teaching model in our country. It is mainly advocated in the classroom teaching. The domination of the classroom is not only the teacher, but more importantly, the interactive learning between teachers and students. The classroom is not simply the teacher imparting knowledge, but the student actively absorbs the knowledge brought by the teacher. Interactive teaching advocates the practical application of knowledge brought to students through interactive communication in the classroom. This method is gradually applied in College English teaching in China. Such teaching model can improve students' overall English ability and promote students' thinking.

**Keywords:** Interactive teaching; College English teaching; Teaching mode

## INTRODUCTION

There is a clear difference between college English teaching and middle school English teaching. College English classrooms pay more attention to the initiative of students. Teachers will no longer take care of every student's situation like in middle school, nor will they make more strict requirements for students. Moreover, college English has higher requirements for students and pays more attention to the practical role of English. The interactive teaching mode encourages teachers and students to communicate and study together in classroom teaching, and prompts students to think and solve problems, to digest the knowledge they have learned, which perfectly meets the goals of college English teaching [1]. Therefore, the interactive teaching mode is a good way for college English teaching. It can create an environment and conditions for students to use the language in the classroom, and improve students' English ability.

### 1. THE CONCEPT AND SIGNIFICANCE OF INTERACTIVE TEACHING MODEL

Classroom teaching is composed of teachers and students. Therefore, scientific and effective classroom teaching should be participated by students and teachers. Interactive teaching mode is that teachers set aside enough time for students to think about problems and turn them into their own knowledge in the process of classroom teaching. In the interactive

teaching mode, students completely become the domination of classroom teaching, and teachers play the role of guide. Starting from the content and structure design of classroom teaching, students are encouraged to actively think and solve problems in classroom teaching, and learn and progress together with others [2].

Interactive teaching model can make up for the disadvantages or shortcomings of the traditional English teaching model. First of all, the interactive teaching mode is conducive to cultivating students' comprehensive ability. The difference between the interactive teaching mode and the traditional teaching mode is that the domination of the interactive teaching mode classroom is students. Students can clearly perceive their sense of existence in this class, which is conducive to students' active participation in teaching activities and courage to express themselves. When they have some incomprehensible knowledge in class, they can also ask the teacher quickly, which helps them absorb English knowledge. It cultivates students' innovative spirit and independent learning ability, and improves their comprehensive quality. Secondly, the interactive teaching model helps students find themselves, cultivates students' subject consciousness in the classroom, helps shape students' complete personality and promotes students' all-round development. The teaching atmosphere of interactive teaching can effectively reduce the tension in the classroom and enable students to release themselves and express themselves, and cultivate students' autonomy [3]. Finally, interactive teaching can significantly improve the teaching efficiency. The classroom of interactive teaching can solve many problems in the classroom. Students will take the initiative to learn knowledge. Such teaching enables students to obtain more knowledge in the shortest time. Teachers can discuss and analyze with students to solve students' problems, which also effectively improves students' ability to solve problems.

### 2. THE SITUATION OF INTERACTIVE TEACHING IN COLLEGE ENGLISH TEACHING

(1) Teachers are not proficient in interactive teaching mode.

Because the interactive teaching mode has been used for a short time, many teachers are not proficient in classroom interactive teaching and do not have enough mastery of the classroom. Interactive teaching is mainly a complementary classroom

activity mode between teachers and students. Many teachers have insufficient understanding of interactive teaching. Interactive teaching may be limited to questioning interaction in the classroom, but questioning interaction is only a small aspect of interactive teaching. Such a classroom is not enough to be called interactive teaching classroom. Because teachers are not proficient in using this model in the classroom, the interactive teaching model can not achieve the expected effect. As a result, students are more at a loss in the classroom, which is not help to improve the teaching effect [1].

(2) Students do not adapt to the classroom atmosphere and lack confidence in learning.

College students have experienced three years of hard English learning in senior high school. To some extent, most students' English level can meet the basic learning standards. Therefore, many teachers believe that there are some relatively simple contents that students can learn by themselves, or that most students have certain oral ability. However, at present, college entrance examination in China has no requirements for oral English. In fact, most students' oral ability is worse than that of the written examination [2]. In the interactive teaching mode, the most important thing is for teachers to communicate with students. English classroom naturally uses English for communication, but many students think their oral ability is poor and do not take the initiative in the classroom, which leads to the tense classroom atmosphere and is not conducive to students' learning. The classroom atmosphere of interactive teaching needs to be relaxed and comfortable. Many students have a better understanding of English words and grammar. They are relatively poor in practical application for communicating in English. They may show their poor side in interactive teaching, so it is easy to lead to students' lack of interest and confidence in learning English.

### 3. STRATEGIES OF INTERACTIVE TEACHING IN COLLEGE ENGLISH TEACHING

3.1 To change the concept of college English teaching  
From the perspective of the renewal of teaching concepts in recent years, it has been advocating to cultivate students' innovative thinking and active development ability, but the teaching methods have not been updated. This is also the main reasons that the teaching goals cannot be achieved under the new curriculum reform. The application of interactive teaching in college English teaching is the effective implementation of modern teaching methods and an important manifestation of the transformation of teaching concepts [3].

In the past, people's evaluations of teaching effects tended to be whether the content of the teacher's narration was wonderful enough, and insufficient attention was paid to students' participation and learning in the teaching process. This concept is of no benefit to the improvement of students' learning

effects. The interactive teaching model is an important manifestation of the teaching methods in the new era. The prerequisite for its application in college English teaching is the change of teaching concepts. If teachers do not really change their teaching concepts, students will be the domination of English classroom teaching. The authority in English classroom teaching cannot be changed, students' subjective consciousness cannot be released, and interactive teaching is also useless. From the perspective of college English teachers, it is necessary to correct teaching concepts, correctly recognize the important status of students in college English teaching, and then actively adhere to students' dominant position, and encourage students to communicate and promote each other. For English teachers, their own quality has also been improved, and the implementation difficulty of teaching work has also decreased significantly [4]. For example, in college English teaching classrooms, the learning content is extended to related stories, and students are encouraged to use English to participate in the comments of the stories, so that unilateral English knowledge transmission is transformed into interactive learning between teachers and students, which logically realizes the application of interactive teaching in College English teaching.

#### 3.2 To enrich the teaching content of English classroom

Before entering the university, most of the students have actually mastered the most basic English knowledge. The English education in the university must be deeper than the English in the middle school. To learn a language well and learn the development history and usage of a language, we need to pay attention to enriching the content of the classroom in the English teaching in colleges and universities. The content of class teaching can not only be English grammar or words. Teachers can appropriately add some information about the history of English and the process of English development to let students know more about English and better help them learn [5]. The introduction of extracurricular English knowledge can also enhance students' self-confidence in College English learning, and let students have the internal motivation to learn English knowledge, so that students take the initiative to become the domination of interactive teaching and maintain a high degree of learning enthusiasm and participation. In addition, the teacher can also let the students tell their own stories about English in the classroom, or some other understanding of English, which naturally increases the interaction in the classroom, and the classroom teaching is no longer a unilateral impartment of knowledge by teachers [6].

#### 3.3 To pay attention to individual differences

In fact, each student has different understanding of some contents of English. For example, the translation of an English sentence is different in

different scenes and in the eyes of different people. Everyone can have their own reasons for translation. Everyone's opinions are actually unique. In College English teaching, we can pay more attention to the individual differences of each student. Once students are recognized, they will be more interested in this subject, and many of the English content needs them to participate in it themselves. By learning new knowledge, students can expand their thinking and broaden their horizons. Everyone can discuss together in class and everyone can express their views, which is conducive to expanding students' knowledge [7].

The premise of interactive teaching method is that students are on an equal footing in college English teaching. Based on this, college English teachers should also pay attention to changing their roles in the process of carrying out English teaching, and make a correct evaluation of the performance of students to help students take the initiative to learn English [8]. Enough encouragement and praise should be given to students who are still actively participating in English interactive teaching with poor English proficiency, and a relaxed and happy learning atmosphere should be created to urge students to no longer struggle with their own differences in basic English, personality differences, etc., and to help students take the initiative to participate in English interactive teaching, so that their English learning ability can be steadily improved.

#### 4. CONCLUSION

A big drawback of traditional English teaching model is that many students can not participate in classroom interaction. They are passive in acquiring knowledge, and it is easy to ignore students as the domination of the classroom. College English classroom is necessary and important for every student, so we should find a better way to help improve the efficiency of English classroom. Interactive teaching model is a good and practical attempt in College English teaching. It can not only enhance the awareness of interaction between teachers and students in the classroom, but also effectively mobilize students' enthusiasm in learning English and improve students' autonomous learning ability.

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# On Network Security and Its Preventive Measures

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**Abstract:** in the network age, the popularization and development of network put forward higher requirements for network security. The network prevention measures include upgrading and strengthening various hardware equipment and systems, applying data encryption technology, data backup technology, firewall, anti-virus technology, etc., doing double prevention at physical and technical level, strengthening personnel training, improving computer security prevention awareness and skills of network users, and building a more secure computer network environment.

**Keywords:** network security; Cyber threats; Preventive measures

## INTRODUCTION

With the rapid development of computer and network technology, the application of information network technology represented by Internet is becoming more and more popular. Information network has penetrated into many fields such as government, military, culture and education, finance and commerce. It can be said that network is everywhere, and it is changing our way of work and life. With the popularity of the network, network security has increasingly become an important issue affecting the network efficiency, which has also attracted enough attention. The openness, internationality and freedom of the Internet increase the application freedom and put forward higher requirements for security.

### 1. DEFINITION OF NETWORK SECURITY

The international organization for Standardization (ISO) cited the definition of security in ISO 74982 literature as follows: security is to minimize the possibility of data and resources being attacked.

Article 3 of the regulations of the people's Republic of China on the safety protection of computer information system regulates the concept of computer information system security including computer network system: "the security protection of computer information system shall guarantee the safety of computer and its related and supporting equipment and facilities (including network), the security of operating environment and the security of information, Ensure the normal play of computer functions to maintain the safe operation of computer information system. "

In essence, network security is information security on the network. It means that the hardware, software

and data in the network system are protected from accidental or malicious attacks. The system runs continuously, reliably and normally, and the network service is not interrupted. In a broad sense, all the related technologies and theories related to the confidentiality, integrity, availability, controllability and non repudiation of information on the network are the research fields of network security.

The European community defines information security as follows: "network and information security can be understood as the ability of network and information system to resist unexpected events or malicious acts under a given security level. These events and actions will endanger the availability, authenticity, integrity and confidentiality of stored or transmitted data and services provided through these networks and systems. "

From the perspective of social education and ideology, unhealthy content on the Internet will hinder social stability and human development, which must be controlled.

### 2. THREATS TO NETWORK SECURITY

Network security threat refers to the users, things, ideas and programs that pose a threat to the network. Network threats come from many aspects. From the perspective of attack objects, network security threats can be divided into man-made threats and non-human threats. For example, all kinds of man-made attacks from all over the world (computer crime, information theft, data tampering, cable connection, computer virus, hacker attacks, etc.), and non-human threats from floods, fires, earthquakes, accidents, electromagnetic radiation, etc., may also be improper use and mistakes of internal personnel. At present, the main man-made threats in the network are mainly manifested in the following aspects.

#### (1) Unauthorized access

Without prior consent, the use of network or computer resources is regarded as unauthorized access, such as intentionally avoiding the system access control mechanism, abnormal use of network equipment and resources, or unauthorized extension of authority, unauthorized access to information. It mainly has the following forms: counterfeiting, identity attack, illegal users entering the network system for illegal operation, legal users operating in an unauthorized way, etc.

#### (2) Information leakage or loss

Sensitive data is leaked or lost intentionally or

unintentionally. It usually includes information lost or leaked in transmission (for example, hackers can intercept confidential information by means of electromagnetic leakage or wiretapping, or deduce useful information by analyzing parameters such as information flow direction, flow, communication frequency and length, such as household registration order, account number, etc.), Information is lost or leaked in the storage medium, and sensitive information is stolen through the establishment of hidden tunnels.

### (3) Destroy data integrity

Steal the right to use the data by illegal means, delete, modify, insert or resend some important information, so as to obtain the response beneficial to the attacker and interfere with the normal use of the user.

### (4) Denial of service attack

It constantly interferes with the network service system, changes its normal work flow, executes irrelevant programs, slows down or even paralyzes the system response, affects the use of normal users, and even makes legal users excluded from entering the computer network system or getting corresponding services.

### (5) Spreading virus on the Internet

Spreading computer virus through network is much more destructive than single computer system, and it is difficult for users to prevent. By understanding the general classification of threats, we can identify various types of attacks on the Internet. Common attack means include:

Spoofing: a host impersonates another entity in a network. Such as IP spoofing, ARP spoofing, etc;

Monitor: sniffer is used in the network to read the data packets sent on the network, which is a passive attack mode;

Denial of service (DOS): make a host unable to provide services, such as causing system crash;

Brute force: it uses repeated attempts to defeat authentication. These attacks use files containing all kinds of words and special data, constantly trying to guess the user name and password;

Trojan: it is a kind of application program, service or program running in the background with legal behavior on the surface. It is hidden and is actually used to destroy the system or steal information;

Virus: a destructive application designed to spread from one system to another;

Social engineering: use the weakness of human nature and psychological knowledge to obtain the sensitive information of the target system.

## 3. ANALYSIS OF EFFECTIVE PREVENTIVE MEASURES TO ENSURE NETWORK SECURITY

In the early stage of network construction, where the network structure and attack means are relatively simple, the network security system is based on protection, relying on firewall, encryption and identity authentication. With the continuous evolution of attack means, monitoring and response is

becoming more and more important in the modern network security system, and is gradually becoming an important part of the network security system. Moreover, it is not only the protection in the process of network operation, but also includes the network security assessment and the service system behind the use of security protection technology.

### (1) Upgrade and consolidate various hardware equipment and systems

For all kinds of hardware equipment and facilities that constitute the network, the high-quality hardware equipment produced by regular enterprises should be purchased first. Secondly, we should pay attention to hardware upgrading. Third, we should timely upgrade hardware equipment according to work needs, and strengthen various patches, so as not to give Trojans and network hackers an opportunity. Increase the protection of network facilities, eliminate various hidden dangers, prevent the destruction of communication facilities and terminals due to various external forces, and ensure the stability and safety of network operation.

### (2) Application of data encryption technology

The application of data encryption technology is more suitable for the open network environment, protect the dynamic information in the computer network, can quickly detect all kinds of active network attacks, but also prevent all kinds of passive network attacks. From the basic situation of technology development and application, apply data encryption key, adopt symmetric key, asymmetric key and other technologies as needed, implement data encryption, and further strengthen the network security factor.

### (3) Firewall and antivirus technology

Install the most reliable firewall technology, monitor computer traffic, and scan and detect some important files regularly and irregularly, so as to effectively filter various network attacks. Especially when the network is seriously attacked, it can automatically close the network port and organize the Trojan horse program to prevent the virus from entering the computer. Antivirus software is the most common security protection software, which can detect, isolate and delete common network viruses, and constantly update the virus database.

### (4) Application data backup technology

In the Internet age, data information is the most important resource. We should try our best to prevent information leakage, ensure data integrity, and prevent all kinds of data theft, tampering or deletion. A more reliable process is to back up some important data in real time to ensure the security of all kinds of important data. Even if it is tampered with or damaged, it can also quickly call the backup data to ensure data security.

To sum up, computer network security is very important. Do a good job in dual prevention at the physical and technical levels, strengthen personnel

training, improve the computer security awareness and protection skills of network users, not only apply various software, but also ensure network security and protect important personal and enterprise information.

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# On the Influence of Language Habits on Learning of English Pronunciation

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**Abstract:** In the learning process of English language, there are some differences between Chinese language habits and English pronunciation, which makes Chinese students have some difficulties in the learning of English pronunciation. Chinese language habits have a certain impact on students' learning of English pronunciation, and they are the main reason why it is difficult for students to learn English language. Therefore, in the learning process of English pronunciation, teachers should help students distinguish the pronunciation characteristics of Chinese and English, so that students can gradually form new pronunciation habits.

**Keywords:** Language habits; English pronunciation; Learning habits

## INTRODUCTION

With the rapid development of economy, the mastery of foreign language is particularly important, and English, as a general language, has a certain impact on students' social interaction. In the process of learning English, the teaching of pronunciation is the most basic aspect. Only a good phonetic level can help students better master the skills of English listening and speaking. At the same time, it can also help students improve their interest in English learning and stimulate students' confidence to enable them to better master English skills and continuously improve their communicative competence.

## 1. REASONS FOR THE IMPACT OF LANGUAGE HABITS ON THE LEARNING OF ENGLISH PRONUNCIATION

### 1.1 Problems of dialect tone

In Chinese learning, different sounds and intonations express different meanings. Each syllable contains not only vowels and initials, but also its fixed tone. For example, "Yi" is divided into four tones, and each tone is different. For English learners, the most important thing is to understand the attitude expressed in the tone, or what tone is needed to change the tone in order to achieve that artistic conception. Relevant data show that among the factors affecting students' learning of English pronunciation, intonation accounts for 36.25%. As an intonation language, English is the most commonly used in the pronunciation of rising and falling tones, which have certain rising and falling intonation changes within the range of sentences. In addition, under the influence of Chinese dialects, when

students learn English pronunciation, there will be vague, such as inaccurate intonation and unclear accent and light tone, which makes the rhythm and beat unable to be matched, and even affects the pronunciation norms of students' English pronunciation. Therefore, in the process of learning English, students should effectively combine Chinese dialects and English pronunciation to avoid the problem of nonstandard pronunciation through their existing rules.

### 1.2 Differences in teachers' pronunciation

Relevant data show that there are some differences between teachers' pronunciation and students' pronunciation, and 32.5% of students have reflected this problem. When students first come into contact with English, teachers, as guides, teach students English knowledge and English pronunciation. It can be said that how students learn English is closely related to teachers' education. However, college students are different. There are teachers from different regions in the University, which have different dialect characteristics, and each teacher's pronunciation has certain differences, especially in oral English dialogue, each teacher's pronunciation habits are different [1]. Therefore, the differences in pronunciation make it difficult for students to understand the meaning expressed by teachers, resulting in great differences in pronunciation between teachers and students, so students' English pronunciation will be affected by language habits.

### 1.3 Differences in local accent

With the rapid economic development, the migration of dialects has caused certain differences in regional accents, and its impact on speech is the greatest. For example, most people pronounce "rao" as "yao" in Chinese; while in English learning, through questionnaires, it can be known that a small number of students are not clear about the pronunciation of the word "reading". It makes students have a certain deviation in perceiving the meaning of words, resulting in the inability to effectively identify the characteristics of pronunciation in the process of learning English, and they adopt nonstandard interlanguage for imitation and judgment. In this way, students are easy to be misled by specious pronunciation and pronunciation errors. Therefore, in order to learn English well, students should not only recognize their pronunciation and actively find solutions, but also constantly practice English

pronunciation to improve their pronunciation.

## 2. COUNTERMEASURES TO AVOID THE INFLUENCE OF LANGUAGE HABITS ON THE LEARNING OF ENGLISH PRONUNCIATION

### 2.1 To improve the environment for pronunciation practice in schools

In the actual teaching, most students hope to have more oral communication. Therefore, teachers should add various forms of oral practice in English classroom teaching to stimulate students' interest in learning and enable them to actively participate in oral English communication activities, such as some interesting and catchy English poems. Students can be arranged to read aloud in the classroom, and teachers take irregular inspections. In addition, teachers can organize students to start "listening to English" activities in the classroom, and play English short plays with campus radio, so that students can practice to identify tones in the process of listening. In this way, students' enthusiasm for learning English can be effectively stimulated. At the same time, we can also carry out "English corner" activities, so that students can practice oral English more, so as to enhance students' oral English ability and help them better improve their English pronunciation. In addition, in the process of daily communication, teachers should instruct students not to use dialects to avoid the influence by dialects when learning English pronunciation [2].

### 2.2 To expand the channels for students to practice English language

In the actual teaching, the teacher can let the students group in pairs and practice English. Language learning is never accomplished overnight. Only by continuous practice can it be completed better. In the entire English learning process, pronunciation learning plays a more important role in linking the previous and the next. Therefore, students' pronunciation practice in pairs can make the atmosphere of English learning among students stronger, so as to effectively improve the problems of students' English pronunciation due to the influence of dialects. At the same time, it can also guide students to use the Internet to learn to correct their English pronunciation. Through the Internet, students can be more intuitively exposed to the correct pronunciation of English. For example, students can watch more American dramas and imperceptibly correct students' pronunciation, so as to help students reduce the impact of dialects on English pronunciation. On the other hand, students can listen

to some English songs with a high degree of vocalization, and students can better exercise their oral English by listening and singing more, thereby enhancing their oral skills. What's more, in order to learn a language well, we need to constantly practice. Only by constantly improving our own shortcomings in practice can we continue to make progress. The same is true for the learning of English pronunciation. Through continuous practice, the influence of dialects on the learning of English pronunciation can be reduced. Only when students truly master the accurate pronunciation of English can they learn to use the pronunciation intonation to express their emotions, so that students can better use English for communication. And targeted exercises should be taken to further strengthen students' ability to use pronunciation and intonation, including allowing students to listen to more text recordings, encouraging students to talk more in English, etc., so that students can actively speak English through practice, and test their English communicative ability. Moreover, in this way, it can also help students exercise their English listening ability.

## 3. CONCLUSION

From the above, we can see that dialects have a great impact on English learning, so we should pay attention to the impact of dialects on English learning. In the process of learning, students should flexibly use relevant learning tools to continuously enhance their English pronunciation ability and to overcome the influence of their own dialects on English pronunciation. In addition, we can also use some unique pronunciation in dialects to better master English pronunciation, so as to enable students to improve the accuracy of English pronunciation and make students more actively participate in English learning.

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# Theatrical Techniques in *Who is Afraid of Virginia Woolf?*

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**Abstract:** *Who's Afraid of Virginia Woolf?* is a famous play by the prominent contemporary American playwright Edward Albee. Its unique style and shocking stage effect have aroused hot discussion. The paper explores the use of various symbols and rich literary-biblical-mythological allusions in the play. The absurdist tricks of anti-rational language, fragmented plot and absurd behavior are also analyzed.

**Keywords:** Edward Albee; Theatre of the Absurd; Theatrical Techniques

## 1. INTRODUCTION

Edward Albee (1928-2016) is the most important playwright in America in the 1960s. He is very prolific and had produced 32 plays and a collection of essays by 2014. His works are strictly structured and exquisitely designed, mainly studying the dark side of human psychology such as betrayal, abandonment, illusion and reality. His representative works are *The Zoo Story* (1958), *The Sandbox* (1959), *Who's Afraid of Virginia Woolf?* (1961), *Seascape* (1974), *Three Tall Women* (1990), *The Goat, Or, Who is Sylvia?* (2000), etc. He has won three Pulitzer Prizes for Drama, two Tony Awards and many other important awards.

*Who's Afraid of Virginia Woolf?* is a three-act play with the name taken from the American nursery rhyme "Who's Afraid of Virginia Wolf" popular in the 1950s. The play tells the story of new professor Nick and his wife Honey invited by George and Martha to their house. In the three acts "Fun and Games," "Walpurgisnacht" and "The Exorcism," the two couples play four absurd games of "Humiliate the Host," "Hump the Hostess," "Get the Guests" and "Bringing up Baby," which reveal their secrets that their marriage and existence depend much on pipe dreams. Albee vividly shows the audience the broken marriages, hopeless families, and the twisted spiritual world of people in modern society. The play has been filled with tension and depression from beginning to end, many scholars have taken it as a work full of nihilist elements but the play also contains something affirmative. Albee conveys the message that the happiness derived on illusion is false and will not last long and only by breaking the fantasy and facing the reality bravely can we have a chance to get spiritual redemption.

Albee's theatrical techniques in the drama includes

deliberately directing the audience into unknown situations. The way in which the play culminates has been a source of endless debate. It is also a source of dramatic richness for the show. Throughout the play, Albee has been challenging the audience's sense of logic and what is real. This subversion of audience expectation culminates in the revelation of the son myth. But we don't know that until after the revelation. In fact, Albee sets us up: He prepares us for a greater emotional shock by a sudden turn of events. Besides the reversal of events, other techniques are used. The following will discuss the use of symbols, allusions and absurdist tricks in the play.

## 1. USE OF SYMBOLS

The title of the play is symbolic. Albee recalled that he first saw it at a bar (the original name for the play was *The Exorcism*). The title *Who is Afraid of Virginia Woolf?* comes from a nursery rhyme, and citing a modernist novelist invites a lot of speculations. At first, it seems just nonsense but contains an emotional elegy for the characters' failure. The rhyme recalls "Who is afraid of a big bad wolf?" another nursery rhyme and hints at the inner fear of all the characters. It also hints at Virginia Woolf, a modernist writer who wrote about modern people's alienation and committed suicide. She explores illusion and reality in her fictions, as did the tragic characters in Albee's play.

George and Martha serve as the failure of the American Dream. Their names are reminiscent of the first President George Washington and First Lady Martha Washington. This George dreams to become the college president but fails to. Unlike Washington, who couldn't lie, George lives on lies. And this Martha, far from the revered image that Martha Washington presents, is but a slut flirting with the man guest before her husband. Albee remarked in 1965, "I named the couple George and Martha--after General and Mrs. Washington. There might be an allegory to be drawn, and have the fantasy child the revolutionary principle of this country that we haven't lived up to yet. ... There is contained in the play... an attempt to examine the success or failure of American revolutionary principles" (Kolin 1988: 58). George and Nick's departments are symbolic. George is a history professor, outdated, meaningless, and powerless, "stuck" in the history department. He is already a relic of the past. In contrast, Nick embodies

the promising future in his youth and his position in the department of biology. Nick represents the new generation, submitting human ideals to a pragmatic outlook on life, which is evident when he tells George that money instead of love prompts him to marry Honey and he will make every effort to rise in professional rank. George's description of a genetically altered race of superhuman that look like Nick means that Nick's mercenary drive will push him to success.

The sound also carries symbolic meanings. The central sound--the doorbell chimes is granted with multiple meanings. The bell chimes echo the Catholic mass, marking the transformation of the host and wine into body and blood, and marking the progress of the service. The bell chimes here mark an important moment of progress or movement in the couple's life. The chimes act as a catalyst for George to realize what he had to do, "killing the son" to drive away their shared illusion, thus paving the way for their resurrection.

## 2.USE OF ALLUSION

Classical mythology is alluded in the context of the drama. The setting is at New Carthage town. Classical Carthage is the home of the mythical tragic lovers Dido and Aeneas, who refers to the modern tragic couple George and Martha. The ancient civilization of Carthage was destroyed in the 2nd century BC. The modern Carthage town is taken as the site where the American Dream is ruined.

Albee cites many literary allusions throughout the play. In the third act, he specifically quotes a line from Tennessee Williams' *A Streetcar Named Desire*, "flores para los muertos," meaning flowers for the dead. This line is heard by the tragic woman Blanche from the street vendors, which heralds her impending mental breakdown and emotional death. George uses this line to herald the death of their son and the death of their marriage.

Biblical allusions are found in the play. Albee names Act III as "The Exorcism," a ritual to expel evil spirit. In this act George exorcises the destructive power of their imaginary son on their marriage in an attempt to build a relationship based on absolute reality. George and Martha's son becomes a Christ figure who is sacrificed to heal their relation. Martha calls the boy "poor lamb," and Christ is also called "the Lamb" sacrificed to redeem man's sin.

Albee makes use of historical, mythological, biblical and literary allusions in the play which multiply its meanings and prompt the audience to view the play as an allegory for the decline of Western civilization. This is what Albee had in mind when, months before the play was staged, he said, "Who's Afraid of Virginia Woolf? has something to do with what I thought the American Dream had to do with--the substitution of artificial for real value in this society of ours" (Kolin 1988: 17). The rich use of allusions has long been employed by dramatists, and Esslin, in

An Anatomy of Drama, points out the beauty of such method:

The total structure of a dramatic work thus depends on a very delicate balance of a multitude of elements, all of which must contribute to the total pattern and all of which are wholly interdependent [...] That is the true miracle of drama, its true poetry. (Esslin 1976: 53)

The cumulative, dynamic structural interdependence discussed by Esslin captures the dramatic power from Albee's citing history and mythology. Such interdependence also explains the social and cultural connotation embodied in the play, giving the work specific intensity.

## 3.TRICKS OF THE THEATRE OF THE ABSURD

Illogical language and absurd plot are features of the dramas in the school of the Theatre of the Absurd. Traditional drama language is an important tool to promote the development of the plot, but in the play, George and Martha are in endless fights. Language fails in communication, and their meaningless language also signifies the void in the characters' life. Traditional dramas have stress on a central plot, but the central plot in the play is dissolved by seemingly irrelevant fragments. We are presented with George and Martha's endless verbal games, abuse, quarrels, and fights. It blends fantasy, reality and memories, and the former fragments of their married life are constantly intertwined. Besides the fragmented plot, the absurdity and abrupt development of the plot are confusing. George and Martha talk much about their perfect son, which turns out to be a fiction. The "son" is their shared creation to conceal their marital troubles and put on a facade of happy family.

Absurdist playwright Eugene Ionesco commented on absurdist drama: Drama should be as childish, exaggerated and stupid as possible; the inversion of the situation must be violent and sudden; and only by this, can the meaning of this farce be shown, through its unacceptability, stupidity and parody so as to conceal its serious meaning (Esslin 2003: 110). In the play, Albee skillfully uses the tragicomedy, farce and other exaggerated forms to make the scene grotesque, playful and ridiculous. For example, facing Martha's many verbal insults, George tries to suppress his anger and all of a sudden he explodes and turns a fake gun at Martha and holds Martha by the throat. George hides his real anger in a game-like banter, making the audience difficult to distinguish his true feelings. After George raises his gun, Martha first holds her breath and then laughs as a parasol, not a bullet, erupts from the gun barrel. The absurdist drama focuses on the revelation of the distortion and alienation of characters' spiritual world, and their inner divided state is often presented through absurd and weird language and deeds.

## 4.CONCLUSION

Who's Afraid of Virginia Woolf? is a classic by Albee, reflecting the spiritual state of American society in

the 1950s and 1960s. Albee conveys his concerns about the contemporary social conditions in the United States by describing the lives of George and Martha, Nick and Honey. The New England College in the play is supposed to represent the forefront of human civilization and thoughts, but in such a place people's mental state lingers on illusion, let alone the spiritual crisis in the so-called elite people. Illusion is comforting but destructive and paralyzing. Albee hopes that people will confront the real world bravely rather than living on pipe dreams. This classic play has been much discussed by critics from various perspectives, and its success rests with the various theatrical techniques he employed in the play, which multiple the meanings of the play.

## ACKNOWLEDGEMENT

This paper is supported by the following projects.

1. Undergraduate Teaching Reform Project of Guangxi Higher Education (2020JGB114)
2. Guangxi Degree and Graduate Education Reform Project (JGY2020015)

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# The Value Connotation of the Thought of Socialism with Chinese Characteristics

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**Abstract:** The thought of socialism with Chinese characteristics is a highly manifestation of the sinicization of Marxism and the crystallization of wisdom. It is the fundamental guide for a century of party history to carry forward the past and realize the great rejuvenation of the nation. To comprehend the socialist ideology with Chinese characteristics, it is necessary to understand its value connotation, which has played an important role in the current ideological and political education.

**Keywords:** socialism with Chinese characteristics, thought, value connotation

## INTRODUCTION

Excavating the spiritual connotation of Sinicization of Marxism from practice is helpful to explain the important part of its spiritual connotation. In-depth study of the thoughts of Sinicization of Marxism is conducive to clarifying the way of educating people and laying the foundation for ideals. It is the great rejuvenation of the Chinese nation. Inevitable choice.

### 1. TAKE HISTORY AS A MIRROR AND CORRECT THOUGHTS

Through the study and observation of the author, I found that there are three kinds of understandings in the process of interpreting the value of the spirit of Marxism in China. Combining with the existing problems of the current "three advances", a simple summary is made. One is to overemphasize the ultimate manifestation of the "three advances" work. "On the basis of assessment of heroes" In some colleges and universities, there is still a phenomenon that pure student scoring determines the salary performance of ideological and political teachers. In theoretical research, hope that "into the brain" means recitation, memory, etc., which ignores the essence of "into the brain". Its core lies in integrating Xi Jinping's thought of socialism with Chinese characteristics in the new era throughout and daily use. Instead of focusing on the expression "a gust of wind, a rain", the key lies in guiding people with thoughts, influencing people with thoughts, and passing thoughts from person to person. The second is a metaphysical understanding of the "three-entry" work. The "entry into teaching materials, into the classroom" lacks the need for modern youth and college students. The theoretical content of Xi Jinping's new era thought is "paragraphed and formatted" in the textbook and presented in the

classroom. Individual college teachers are accustomed to using a textbook, a PPT, and a lesson plan to understand the thinking of students with inherent thinking, and guide students in a "crawling" education method, ignoring the essence of the "three advances", dwarfing and weakening The Party's ideological and spiritual core, and ideological education are out of control and control. The third is that there is not enough research on the formal methods of the "Three Entries". Most researchers cut the "three advances" into three parts, ignoring the inevitable connection between the three, and the overall demands of the youth group for socialism with Chinese characteristics in the new era of Xi Jinping. In colleges and universities, there are also phenomena such as low classroom "head-up rate", insufficient "participation" after class, and "double skin" in learning and doing. The "Three Entries" are closely related to talent training, and are directly related to whether we can form a common value identity, whether we can standardize social behavior, and affect long-term strategies such as ideological stability and national unity.

### 2. MAKE SENSE OF SELF-CULTIVATION AND PROMOTE THE SPIRIT

#### 2.1 Consolidate the leadership of socialist ideology

The history of the party has been magnificent over the past century, and it has undergone drastic and profound development and changes time after time.

[1]From the perspectives of the continuous adjustment of economic structure, the differentiation of interest groups and classes, and the progress of social productive forces, the Marxist Sinicization theory summed up a set of theoretical thoughts that conform to the development and changes of the times, especially Xi Jinping's new era with Chinese characteristics. The ideology represents the latest achievements of Marxism and protects the daily life of people from outside thoughts, and reshapes the transformation and progress of mainstream core values. The spiritual connotation of the Sinicization of Marxism took the initiative to face the various challenges of economic globalization and ideological gridding, confronted ideological struggles, and turned the tide against the ideological attack of western popular culture on the youth groups of our country. Taking Xi Jinping's new era of socialism with Chinese characteristics as the main focus, promote the continuous progress of ideological and political

work in colleges and universities, and give full play to the guiding role of advanced theories in specific work, so that they can truly master the youth The group, to drive the surrounding people, effectively deal with the invasion and corrosion of Western culture, resolutely prevent the "color revolution" without gunpowder, and firmly grasp the ideological leadership and the right to speak.

## 2.2 Consolidate the ideals and beliefs of college students

College students are a key minority in the youth group. The friction between countries and the contest between evil and justice have gradually shifted the "front" to college students. A series of rampant activities by the "Hong Kong independence" elements have shown increasingly severe value. Conflict and ideological collision. Young people are strong, and the country is strong. Young people bear the heavy responsibility of the great rejuvenation of this nation. They are the builders and successors of the new era of socialism. The ideology, culture, and values of young people are critical to the national conditions. Xi Jinping's New Era of Socialism with Chinese Characteristics, with a far-sighted and insightful vision of the world, accurately studied and judged the laws of current social development, gave contemporary college students clear guidance and steers, reviewed history, focused on the future, and looked back on the history of the Chinese nation. Galaxy's civilization draws on the driving force for progress, and soberly reflects and introspects from the shame of backwardness and beatings in modern China. "Why and how to live?" This is a viewpoint that contemporary college students must recognize when they cultivate their family and country feelings and grow into talents. . "From concept explanation to idea instillation, from guiding education to ideological correction, cultivating personality to promoting spirit, we have comprehensively safeguarded the core value system of socialism and ensured that the theoretical system of socialism with Chinese characteristics is firmly rooted. This is related to the future of the Chinese nation. Destiny.[2]

## 2.3 Give play to the functional attributes of imperceptibly guiding public opinion

To promote Xi Jinping's thoughts on socialism with Chinese characteristics in the new era, colleges and universities are the main positions, and the party media plays the main theme. The two echo each other and go hand in hand. The media always insists on ideological guidance, always regards the publicity of the party's policies and party work as the charter, promotes the main theme of the times, and guides the mainstream public opinion of the society. On the one hand, it is closely connected with social practice, and with the help of party media to enrich the form, make "into the brain" more "into the heart", and more intent on knowing and doing. On the other hand, youth groups are active elements in the media and a key

part of public opinion. They can infect and influence the trend of public opinion, and they also bear the important responsibility of guiding public opinion. From the perspective of the current public opinion environment and communication methods, in the era of fragmented reading, the pursuit of profoundness, the advocacy of quality in the cognition under the mud and sand, and the persistence of attitudes in excessive spiritual entertainment, how to maintain the strength of mainstream values, and how to continuously progress and develop In society, promoting righteousness, flogging ugliness, resisting vulgarity, and transmitting positive energy requires the use of multiple means and methods to integrate the logical relationship between theory, method and practice, promote the new trend of the times, and adhere to the guidance of fashion. It can be seen from this that the meaning of value connotation is long, and it is necessary to focus on the application of the developing socialist ideology with Chinese characteristics, so as to play a key role in guiding the youth group and guiding the correct public opinion orientation, and release Xi Jinping's new era of China. The ideological brilliance of characteristic socialism.

## 2.4 The inevitable choice to realize the great national rejuvenation

In-depth promotion of Xi Jinping's thoughts on socialism with Chinese characteristics in the new era is the only way to continuously strengthen and in-depth improve the ideological and political work of colleges and universities, because it is related to the fundamental issue of what kind of university to run and how to run a university, and the party's leadership over the university. It is a major political task and strategic project to have a successor to the cause of socialism with Chinese characteristics. Nowadays, we strengthen the promotion of Xi Jinping's new era of socialism with Chinese characteristics into teaching materials, classrooms, and minds, and constantly guide college students to understand and master Xi Jinping's new era of socialism with Chinese characteristics, firmly establish a world outlook, outlook on life and values that conform to the characteristics of the times, and promote And to practice the core values of socialism, and to improve the ability to consciously use Marxist standpoints and methods to analyze and solve practical problems is an important task for the ideological and political work of young people. The "trinity" proposed in colleges and universities promotes the work of deep understanding of learning, that is, ideological and political courses have been established, ideological and political classes have been set up, ideological and political groups have been assigned, ideological and political dictatorships have been clarified, and Xi Jinping's new era of Chinese characteristics will be fully integrated. Introduce important content of ideological and political education and classroom teaching in colleges

and universities, and deeply strengthen college students' theoretical, emotional, and behavioral identification with Xi Jinping's new era of socialism with Chinese characteristics, so that scientific theories can be truly absorbed in their minds, and thus contribute to the cultivation of socialism.

[3] Qualified career builders and reliable successors lay a solid ideological foundation.

### 3. CONCLUSION

A deep understanding of the connotation of the Sinicization of Marxism is conducive to enriching our spiritual world, conducive to building an ideological and political theory system with Chinese characteristics, and conducive to enhancing the theoretical self-confidence of the Chinese nation. Through a deep understanding of the spiritual content

of the socialist ideology with Chinese characteristics, a deep understanding of the value connotation and active integration into daily practice, this plays a vital role in the process of our deep integration into society.

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# Extracurricular Practical Education Activities for European and American Students

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**Abstract:** Extracurricular activities are an important part of the curriculum structure and an important way to promote the all-round development of students. At present, countries all over the world attach great importance to extracurricular activities, and the development and theoretical research of extracurricular activities are very active, It will be of great benefit to improve and strengthen extracurricular activities in primary and secondary schools in China. How to treat the status of extracurricular activities in the curriculum structure is an issue that foreign scholars attach great importance to. At present, scholars in many countries advocate bringing extracurricular activities into the curriculum planning as an important part of the curriculum structure.

**Keywords:** European and American students, extracurricular practice, educational activities

## 1. CONCEPT AND UNDERSTANDING OF EXTRACURRICULAR PRACTICAL EDUCATION IN EUROPE AND AMERICA

In some European and American universities, they attach great importance to students' self-education and self-management, and fully reflect students' autonomy and subjectivity through students' autonomy and participation in school management; Cultivate students' ability to adapt to society through social services and other activities [1]. Many schools do not set up moral education courses, but emphasize the moral education role of hidden courses. Although this role has a slow impact on students' moral development, its effect is lasting.

### 1) Attach importance to professional practice

In many European and American universities, professional practice or internship is mostly a formal teaching plan and given certain credits. Some engineering colleges and universities in the United States stipulate that college students should spend 15 months in factories and enterprises during their four-year study in University. At Columbia University, students majoring in international relations can "attend classes" in the UN auditorium, and those studying economics can go to Wall Street for internship[2]. In other universities, those who study history should go to archives and museums, those who study law should go to legislative and judicial institutions, and those who study politics should work in political institutions or public decision-making institutions. In the former Soviet Union and some

Eastern European countries, the situation of professional practice is similar to that in the United States. In the Federal Republic of Germany, professional practice is also highly valued. If the engineering college stipulates that the time for students to participate in practice or internship shall not be less than 26 weeks. Science and engineering students take the "intermediate examination" after one to three years. After passing the examination, they must take part in a certain productive practice before they can write their graduation thesis. The main purpose of these professional practice activities is to cultivate students' professional ability and skills and improve their academic level. At the same time, they are bound to exercise the functions of affecting students' concepts, attitudes and character in life and moral values.

2) Take students' self-management and participation in school management as important contents of educational reform

Students' self-management and participation in school management is one of the major reforms of traditional education in modern European and American universities [3]. Since the mid-1960s, the student movement caused by the internal contradictions between society and education has made student autonomy one of the principles of modern European and American universities, and the concept and measures of students' participation in school management have also become an important principle and system of internal management of modern European and American universities. Student autonomy and student participation in school management are not only a problem of respecting students' rights and making management more democratic and effective in modern university management, but also a problem of educating students or becoming qualified citizens through students' self-education.

The scope of student autonomy and student participation in school management is very wide. Students conduct self-management in the form of student groups such as student unions and student autonomous associations. Students need to participate in the formulation of a series of formal systems and the implementation of informal measures, such as the school's enrollment policy, evaluation and employment of teachers, curriculum and content. The proportion of student representatives in Colleges and departments of universities, institutions and

organizations related to management and election is similar. In short, a certain proportion of student representatives participate in the management and decision-making of school affairs has become a formal system. Whether from the perspective of management or student education, these practices are worth learning.

3) Pay attention to the positive role of social services in moral education

In Korea, students must engage in service work in orphanages, nursing homes and other places. The work unit evaluates and gives credits on indicators such as dedication, honesty, consciousness and work attitude “ have also set up similar social service courses in Mexican universities, which are evaluated and recorded as compulsory courses. In Federal Germany, the participation of college students in social service activities has formed a set of national systems, the most characteristic of which is the compulsory civil service system in Germany. Civil service is both an obligation and an opportunity for young people to exercise. Although at first some people did not voluntarily participate in service activities, especially some dangerous or dirty and tired jobs, after 15 months of service, young people believed that they had gained a lot and understood the real situation of society, It has trained the ability of insight into society and practical work. As a special social service activity, compulsory civil service plays a positive role in the determination of young college students' Outlook on life and values and the cultivation and development of good moral character, such as compassion, love, social responsibility and sense of mission. It is a moral education activity with great educational value.

4) Widely carry out work study activities

In foreign colleges and universities, work study activities are carried out widely. In the United States, according to a 1984 survey by the Carnegie Foundation for the promotion of teaching, almost 30% of all full-time students and 84% of part-time students in the United States work more than 21 hours a week. In Japan, the proportion of people who take part in work after school in many universities is as high as 89%. In Federal Germany, since the 1980s, fewer and fewer students have received parental funding and federal education funding, and the number of people who rely on their own holidays and semester work to pay for education and living expenses has gradually increased. Young people should not only have independence, freedom and equal rights with other adults, but also bear the obligations or responsibilities of autonomy and self responsibility.

As can be seen from the above, foreign social practice activities have strong flexibility and students can give full play to their autonomy, but the activities are too scattered and lack centralized education and management.

## 2.THE SIGNIFICANCE OF EXTRACURRICULAR PRACTICAL EDUCATION ACTIVITIES FOR CITIZEN TRAINING

When it comes to education, we have to mention ideological and political education. No matter what country, ideological and political education has the status and role of "lifeline" "Ideological and political education" is a unique concept of Ideological Education in socialist countries.

What is most worth learning from is that civic education is not only taught by teachers, but also pays great attention to practicality. Civic education course does not require students to recite history and political system, but to collect materials from life and discuss them warmly in class. Debate, simulation class and group report are the main teaching forms of civic education. It is precisely because students have deep participation that they are easier to understand and agree with mainstream values. This kind of infiltrative civic education in the United States is worth learning from. In short, infiltration education can not only make the civic consciousness more into the mind, but also cultivate students' creative ability of independent thinking.

In the 19th century, Switzerland was still a poor small agricultural country, but in just a hundred years, it developed into an economically prosperous developed country. Vocational education has trained a large number of skilled and innovative talents for Switzerland, which has played an extremely important role in promoting the development of Switzerland. In my opinion, Switzerland's vocational education has the following areas worthy of reference: giving vocational education a higher economic and social status[4].When it comes to British education, it attaches importance to humanistic "whole person education". Children have a lot of choices of associations and interest activities in childhood[5].These interests and community activities play a great role in the development of children's personality and quality. The development of sports, mental health education and children's personality development are easy to ignore but very important problems.

## 3. RESEARCH RESULTS

Education is always worth exploring. Research shows that in the countries with the largest expenditure on education in the world, more than one third of parents spend all their spare time on their children. Although it is fortunate for the country that parents attach importance to education, there are still many misunderstandings in education. In view of this, we should keep an eclectic attitude, actively adopt the advanced concept of education, and constantly revise, develop and improve education, so as to promote the education work in the new era to a new level.

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# On Mathematical Modeling Approach Based on Neural Network and Computer Multidimensional Space

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**Abstract:** In the context of the promotion and use of modern mathematical modeling in various fields, as well as the cross-development of mathematical models and various disciplines and industries, this paper explains two mathematical modeling approaches based on neural network: the establishment of mathematical model based on biological simulated neural network and the establishment of mathematical modeling based on artificial spatial neural network, and explains the related content of mathematical modeling based on computer multidimensional space.

**Keywords:** Neural network; Computer multidimensional space; Mathematical modeling approach

## INTRODUCTION

Neural network and mathematical modeling based on computer multidimensional space are of great significance to modern people and the society. On the one hand, for scientific researchers and technical talents, the emergence of mathematical modeling based on computer multidimensional space has changed the traditional mode of talent training and education, and helps talents establish mathematical multidimensional thinking and spatial application awareness. On the other hand, the application and promotion of mathematical modeling approaches based on neural network and computer multidimensional space have led to the innovative development of many high-tech industries and frontier fields. Therefore, this paper focuses on the mathematical modeling approaches based on neural network and computer multidimensional space.

### 1. THE MEANING AND CHARACTERISTICS OF MATHEMATICAL MODELING APPROACHES

#### 1.1 Features and advantages of mathematical modeling approaches

Mathematical modeling approaches have two characteristics that determine the unique advantages of neural networks and computer multidimensional spaces in mathematical modeling. On the one hand, the construction of mathematical models has the characteristics of subjectivity. It's like 1000 readers with 1000 Hamlet in their hearts. For the same real problem, starting from different perspectives, the mathematical models made based on the different

ideas and methods of modelers, different life experiences, knowledge reserves, and the constraints of social and economic development are all different. On the other hand, the disciplines involved in the establishment of mathematical models and the fields of application for their promotion are extensive. Because the establishment of mathematical models requires comprehensive subject knowledge and a large amount of real data as the basis, such as quantitative analysis of management in management, linear regression model in statistics, and demand analysis in economics, etc. The scope of application of mathematical models is also wide, ranging from the improvement of the efficiency of community governance to the estimated trend of national economic policies, which are inseparable from various mathematical models.

#### 1.2 The significance of applying neural network and computer multidimensional space in mathematical modeling approaches

The established mathematical operations and mathematical formulas that we can come into contact with have a lot of restrictions. The practical problems encountered in our daily lives are often intricate, affected by multiple variables, and there are problems such as interference terms, heteroscedasticity, and multicollinearity between them, and mathematical formulas cannot be directly applied. Therefore, according to the actual situation, we summarize the general law of the development of things and establish a mathematical model, and the mathematical model based on neural network is one of them. Mathematical models can study the main variables that affect the results of experiments, but it cannot fully replicate various variables in real life. Therefore, the result of the mathematical model may not completely match the actual situation, and it needs to be solved and verified. In real life, the establishment of mathematical models requires a lot of formula calculations and logical reasoning, resulting in a great engagement of time and energy for technicians. Therefore, most of the current mathematical models are deduced by computer multidimensional space technology.[1]

### 2.RELATED METHODS OF MATHEMATICAL MODELING BASED ON DIFFERENT NEURAL NETWORKS

### 2.1 The establishment of mathematical modeling based on biological simulated neural network

In recent years, biological simulated neural network is gradually rising, and the application of mathematical modeling is gradually put on the agenda. From the perspective of microbiology, biological neural network has always been a magical system, including the parts of cell body, dendritic axis and synaptic contact. Its nonlinear structure makes it difficult to carry out various experiments and research. Based on the above facts, in the development of modern microbiology and simulation, the establishment and processing of computer simulation system for biological neural network are designed and selected. Because the design concept of equivalent circuit exists in the simulation system, and the equivalent circuit needs circuit theory and neuron dynamics to establish the corresponding mathematical modeling. Therefore, the dynamic equation can be constructed according to the modular unit of neurons in biological neural network, and the mathematical modeling can be established according to the method of calculating the turning frequency of high and low frequency equivalent circuit to express the activation stability and non-activation stability of its time constant. There is no doubt that the mathematical modeling in biological simulated neural networks has been well used.

### 2.2 The establishment of mathematical modeling based on artificial spatial neural network

When it comes to artificial neuron theory, we have to say that the most commonly used is PD algorithm which is also known as PD network. It is composed of three layers of neurons, namely the lowest input layer, the middle hidden layer and the upper output layer. The adjacent layers in the network are connected by full interconnection, but there is no connection between neurons in the same layer, and there is no direct cross layer connection between output layer and input layer. It has advantages that the nodes of the hidden layer can be set freely according to the needs, which can achieve arbitrary precision approximation to any continuous function.

The design based on artificial neural network theory can well solve the difficulty of mathematical modeling in GIS. From the perspective of nonlinearity, artificial neural network has good nonlinear information processing, flexible and effective, and has the characteristics of complete distribution and high parallelism. From the perspective of nonlinearity, artificial neural network can realize nonlinear mapping, establish mathematical model, and approach nonlinear mapping with arbitrary accuracy. On this basis, through the calculation of multi-layer neural network in the front lane, the observed values of independent variables are taken as the input and the observed values of dependent variables are taken as the output. The neural network system with large enough sample

size is used to input different independent variables, obtain different dependent variables, and finally find the real relationship between geographical elements.[2]

### 3. RELATED CONTENTS OF MATHEMATICAL MODELING BASED ON COMPUTER MULTIDIMENSIONAL SPACE

Through computer multidimensional space technology, the mathematical modeling can be visually displayed, many abstract mathematical problems can be concretized, and the shortcomings of flattening and abstraction of mathematical modeling in traditional manual drawing can be overcome. For example, in architectural engineering, it is necessary to build three-dimensional architectural drawings. When studying the principles of many natural phenomena, the display of the law of ocean current and air flow also needs a three-dimensional mathematical modeling. Now the image processing software is diverse, such as CAD, which has been widely used in three-dimensional drawing. Computer space technology provides intuitive multimedia display for the establishment of mathematical modeling and simplifies the difficulty of information expression of mathematical modeling. As the saying goes, fire proves gold. In the actual mathematical modeling process, it needs to be modified and adjusted many times. A large number of practical test results are used to determine the relevant parameters, and the flow charts used in the mathematical modeling are generally multiple, and the calculation is carried out at the same time. Computer multidimensional space technology makes the simulation of mathematical modeling more simple and efficient, so that the efficiency of mathematical modelings can be qualitatively improved, the cost of popularization and use is lower, and the popularity becomes higher.[3]

### 4. CONCLUSION

On the whole, different from traditional mathematical formulas and theorems, mathematical modeling based on neural network and computer multidimensional space are important bridges from books to reality, and tools to solve problems in real life by using mathematical knowledge. Based on the above summary of mathematical modeling approaches based on neural network and computer multidimensional space, it is hoped that in the future, through the further development of mathematical modeling based on neural network and computer multidimensional space, new technologies can bloom and new industries can develop by leaps and bounds.

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# On the Training Strategies of Research Teachers

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**Abstract.** the new curriculum reform calls for front-line primary and secondary school teachers to become research teachers. The training of research teachers is a systematic project, mainly from the aspects of building a perfect management mechanism, strengthening school-based training and strengthening school-based teaching and research.

**Keywords:** research teacher, training strategy

## 1. INTRODUCTION

Curriculum reform brings new opportunities and challenges to the development of education. Every teacher must keep pace with the times, change their ideas, be a researcher of the new curriculum and become a research teacher in order to be in the forefront of curriculum reform.

## 2. TRAINING STRATEGIES OF RESEARCH TEACHERS

The training of research teachers is a systematic project and a long-term and arduous task. Within the scope of a school, in order to realize the transformation of teachers from traditional experience type to research type, we must build a management mechanism conducive to the extensive development of research activities from top to bottom, create a strong research atmosphere, organize and carry out various ways of teachers' self-training activities, and improve research ability.

### 2.1 building a sound management mechanism

#### 2.1.1 democratic management

In the internal management reform of the school, we should strive to create a good humanistic environment and material conditions for teachers' work, introduce the requirements of theoretical learning, project research and thesis writing, and follow the principle of "harmonious spiritual environment as the foundation, practical operation mode as the support and diversified evaluation methods as the guarantee", Promote teachers to become the driving force of active learners, strengthen the formation of incentive mechanism, people-oriented, create a positive campus cultural atmosphere, and let teachers work in a relaxed and happy mood, so as to stimulate teachers' work enthusiasm and improve work efficiency and work quality[1].

#### 2.1.2 scientific quality management

The guarantee of training research teachers the fundamental purpose of school management is to improve the quality of education and teaching, improve the overall quality of educatees and achieve the goal of talent training. The traditional view of quality is that the score is the first. It uses the test score as the standard to measure the quality of education and teaching, so as to mislead teachers to take various means to pursue high scores. In this way, it is difficult to cultivate research teachers[2]. Only by loosening the ties for teachers and lifting the ideological constraints, can the enthusiasm of learning theory and carrying out research be mobilized. In other words, only through scientific quality management can we create good external conditions for the training of research teachers. For example, it clearly puts forward three "looks" to measure the teaching quality: to see whether the students' performance is improved and the extent of improvement, to see whether the students actively participate and the degree of participation in the classroom teaching process, and to see whether the teachers reflect on teaching, write teaching experience and educational teaching papers at any time.

### 2.2 strengthen school-based training

We should seek effective ways and methods to improve teachers' theoretical literacy in practice, and establish relevant systems. For example, by establishing a weekly theoretical learning system, we should adhere to the combination of collective learning and individual self-study, the combination of theoretical learning and experience exchange, and the combination of learning famous works and learning practical experience. Organize and carry out activities such as reading modern education treatises, listening to modern education reports, reading modern education activities and talking about theoretical learning experience. In addition to organizing theoretical study, it can also provide services for teachers' self-study, such as introducing and providing modern educational treatises, setting up teachers' reading room and reference room, excerpts and reprints of theoretical articles in newspapers and magazines, reducing and printing quotations of modern educational theory, etc.

### 2.3 strengthening school-based teaching and research

Just as it is impossible to learn to swim on the shore, if you want to learn to swim, you must go into the water. If you want to become a research teacher, you must grow up in research, you must strengthen school-based teaching and research.

2.3.1 explore the problems and determine the research object

What is the school-based teaching and research research? This is the first problem that every teacher must solve. Firstly, we explore and collect the key or difficult problems encountered by ourselves or other teachers in our school in the actual education and teaching, and build a "resource database of daily education and teaching problems".

2.3.2 put forward ideas and formulate research plans

After the research object is determined, establish a research group, establish the new concept of "problem is subject", organize research members to discuss collectively, put forward ideas to solve problems, formulate subject research plans, and make full preparations in Ideological and material aspects, so as to make the research work planned, scientific and standardized[3]. The content of the research plan generally includes six aspects: the proposal of the subject, the research content, the research objectives, the research methods and steps, the expected results, and the guarantee of conditions.

2.4 establishing a scientific management system and evaluation system

The training of research teachers depends on scientific management system and evaluation system. Schools should fully respect teachers' democratic rights, respect teachers' creative work, strive to create good material conditions and humanistic environment for teachers' work, and create a campus atmosphere with active ideas and strong research atmosphere. The evaluation of teachers' education and teaching quality should adopt diversified evaluation. Through various means, the value of teachers' labor should be assessed and evaluated from multiple perspectives, including teaching and research, top-down evaluation and bottom-up evaluation, so that students, parents, teachers themselves, peers and school leaders can participate in the evaluation of teachers, so that teachers can obtain information from various channels, Continuously improve research ability and teaching level. Among them, teachers' self-evaluation is the activity that the evaluation object actively evaluates their own work performance according to the evaluation principles and evaluation standards. Teachers should be made clear that teacher self-evaluation is an evaluation decoupled from reward and punishment, and its purpose is to promote teachers' development. It is not only a process of critical reflection, but also a process of self-improvement[4]. It is an important part of teacher evaluation. The establishment of scientific management system and evaluation system is a necessary prerequisite for cultivating research type

2.5 actively carrying out school-based research

School based research is a leading organization with teachers as the research subject to solve the on-site teaching problems in the school, establish a regular learning and research system with the teaching and research group as the unit, and help teachers establish development goals. Through interviews and questionnaires, we can understand the development needs of different teachers and formulate the goal system of teachers' professional development for teachers to choose when formulating development goals. In this way, the development goals formulated by teachers are not only personalized, but also reflect the development trend of the school in a certain period.

School based research is the collective research of teachers in our school. Only the research with the collective participation of teachers can form a research atmosphere, a research culture and a common professional lifestyle. In the research of teacher groups, teachers coordinate and cooperate, share experience, learn from each other, exchange skills, and even have the collision of different ideas, which are very valuable and the fertile land for the growth of research teachers.

Although school-based research is carried out in schools, the participation of professional researchers is also an indispensable factor in school-based research. The professional guidance of professional researchers is the dialogue between theory and practice, and the key to the in-depth and sustainable development of school-based research. Educational researchers should step down from the rostrum, into the school, into the classroom and among teachers, formulate development goals with teachers, analyze teaching cases and carry out action research. In the specific links of research, don't give too much advice, let teachers fully develop their creativity, take their own classes and do their own research. Professional researchers are an important force in cultivating research teachers, and school-based research is the main way to cultivate research teachers.

2.6 teachers' active participation in research

The external drive must work through the excitation of the internal drive. To cultivate research teachers, we must stimulate teachers' desire to become talents, let them master the basic methods of educational scientific research, and enable teachers to actively participate in educational and teaching research, which is the key to cultivating research teachers.

First of all, we should solve the problem of attitude. Whether a person can become a talent is closely related to his own attitude. If teachers can correctly understand the great significance of training research teachers, are full of enthusiasm for their work and are determined to be a research teacher, it is possible to make their life brilliant and create achievements.

The second is to help teachers master the basic methods of educational scientific research. For

teachers, there are two most suitable research methods: action research and safety case research. At present, action research has become the main way of scientific research in teacher education because of its flexibility, simplicity and easy operation. Action research aims to improve practitioners' self reflection consciousness and ability to regulate action, and takes solving problems and achieving results as the ultimate goal[5]. Action research is a good way to solve the tendency of separating theory from practice in educational research, which is conducive to improving school work, improving education and teaching quality and cultivating research-oriented teachers. Some people have made a concise summary of action research: the problem is the subject, the work is the research, the teacher is the expert, and the effect is the result. A case is a real story that contains a problem situation or some decision-making behavior in educational practice. Through a fascinating story, it provides you with specific background, characters, occasions, events and consequences, and triggers people's reflection. Case studies are through the writing of cases and the discussion of typical cases, we can improve the educational experience and lessons of ourselves or others to the level of rational analysis, so as to update the educational concept, improve the educational and teaching behavior and improve the professional quality of teachers.

### 3.CONCLUSION

The cultivation of research teachers is a long-lasting thing. Schools need to build a democratic and scientific management mechanism, strengthen teachers' school-based research and gradually grow in research.

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# Research on English Classroom Teaching Strategies in Higher Vocational Colleges Based on Multi-modal Metaphor Theory

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**Abstract:** This essay will be based on the theory of multi-modal metaphor, based on the status quo of English teaching in higher vocational colleges, and explore the research on strategies suitable for English classroom teaching in higher vocational colleges. It mainly includes auditory metaphor strategies, visual metaphor strategies, human body metaphor strategies, cultural metaphor strategies and image metaphor strategies. Through empirical research on various metaphor strategies, in order to better serve the English classroom teaching of higher vocational colleges, the overall goal of the relevant multi-modal teaching system is finally formed.

**Keywords:** multi-modal metaphor English Classroom Teaching Strategies

## I. THE BACKGROUND OF THE RESEARCH

As a way of thinking and cognition, metaphor is universally present in people's language, thoughts, actions and daily life. Driven by the interdisciplinary research of the humanities and the multi-modal discourse research, since the 1990s, metaphor research has been pushed from the perspective of pure linguistics to multi-modal research, causing more and more linguistics Home attention. The most typical is the book "Multi-modal Metaphor" (Forceville & Urios-Aparisi2009), which provides a general review of the cognitive research of multi-modal metaphor, covering the origin, development, focus, and contribution of multi-modal metaphor research. , Challenges, prospects and many other aspects, so that we have a new understanding of the research dynamics in this field.

In recent years, many studies have mainly emphasized the auxiliary function and significance of metaphor theory in semantic discrimination and acquisition. This research mainly raises the application of metaphor theory in language teaching to the level of teaching strategy.

## II: RESEARCH GOALS AND SIGNIFICANCE

Through the research and comparison of multi-modal metaphor theories, it will be helpful to further scientifically guide the discussion of the curriculum and teaching reform models of English teaching in higher vocational colleges. 1. To enable higher vocational students to learn more in English classrooms, play their potential, better integrate into

the society, and lay the foundation for improving their professional level; 2. It is helpful for English teachers of higher vocational colleges to better serve higher vocational students through this theory, and improve the level and efficiency of the classroom.

## III: RESEARCH IDEAS AND METHODS

This essay mainly adopts the research method combining theory and empirical research. Theoretical research is mainly through reading related materials, the research team conducts full discussion and research, masters all the materials related to this subject, and lays a good foundation for in-depth research; expert interviews, mainly to consult experts and scholars with authority in employment research , Ask them to help to further broaden the horizon and depth of the research; empirical research mainly uses survey questionnaires and other related methods to collect relevant data. Grasp first-hand information to enrich and improve research topics.

## IV: THE MAIN CONTENT OF THE RESEARCH

### (1) Theoretical framework

1) Compared with various English teaching methods, English teaching strategy is a concept that crosses teaching methods and embraces teaching skills. English teaching strategy is the application and implementation of systematic teaching methods and teaching behaviors based on English teaching methods. These studies mainly focus on the role of metaphor theory in certain aspects of language learning, such as listening teaching, vocabulary teaching, reading teaching, etc., emphasizing the auxiliary functions and meanings of metaphor theory in semantic analysis and acquisition, and failing to apply metaphor theory to language teaching The application of Chinese has risen to the level of teaching strategies.

### 2) Multi-modal teaching strategy based on cognitive metaphor

As one of the basic means of human cognition, metaphor helps people understand new things and new knowledge. Metaphorical ability and metaphorical thinking contribute to language acquisition. Based on the current situation of college English multi-modal teaching, this study believes that metaphorical teaching strategies that can be applied to college English teaching mainly include the following: auditory metaphor strategies, visual

metaphor strategies, human body metaphor strategies, cultural metaphor strategies, image metaphor strategies, and so on.

### 3) Comprehensive analysis of multi-modal metaphor teaching strategies

The essay proposes an English teaching strategy application model based on multi-modal metaphor. Metaphor teaching strategy is the practical application of metaphor theory in the English teaching process. It is the innovation of teaching ideas in the integration of metaphor theory into each link of English teaching, so that the application of metaphor in teaching is not limited to vocabulary acquisition, semantic recognition and other word and sentence levels.

#### (2) Experimental framework

##### 1). Research Design

The research design includes four aspects: experimental objects, research methods, data collection, and result analysis.

##### Experimental Objects

The objects of this study are non-English majors in our college in 2019. The control group is 76 students. They usually have small classes, but in the experimental stage, they are divided into groups when conducting related questionnaires and other experiments, that is, the three natural subjects of the experimental group. In the three natural classes of the control class and the control class, the same teacher assumes the teaching tasks of the two groups. The number of hours is the same, the teaching materials are the same, the teaching progress is exactly the same, and the exercises assigned after class are exactly the same. The only difference is that the experimental group uses a multi-modal teaching method, while the control group uses a traditional teaching method.

##### 1.2 Research methods

This research uses statistical method as the main tool, supplemented by interview method, questionnaire method and other methods. Conduct interviews first, including open interviews and design interviews. After the first interview, organize the material design questionnaire. 164 questionnaires were distributed and 162 were returned, of which 2 were invalid, and a total of 162 valid questionnaires were received. The content of the questionnaire consists of two parts: one part involves personal information of students, such as age, gender, and major. The other part involves the students' learning strategies, learning motivation, learning habits, self-monitoring ability, evaluation of the instructor, their opinions on the teaching methods of English class, their interest in listening, speaking, reading, and writing in English, and their current teaching materials. Is it satisfied and other items. Regarding the classroom teaching research from the multi-modal perspective, this article makes the following assumptions: The first hypothesis: multi-modal teaching has no effect on English

learning, expressed by the formula:  $H_0: r=0$ ; the second hypothesis: multi-modal Can promote English learning, expressed by the formula:  $H_1: r>0$ ;  $r$  is the difference in average score. According to logical attempts, we know that the result cannot be  $H_2: r<0$ , so there is no third hypothesis. Then compare the average scores of the two tests before and after the experiment to verify the hypothesis.

##### 1.3 Data collection

At the beginning of the first semester, all students in the 2019 experimental class and the control class will be tested in English; at the end of the first semester, a final exam will be conducted uniformly. The two test propositions are arranged by the Public English Teaching and Research Office. After the two test papers are assembled, teachers are arranged to try them to ensure the reliability, validity and discrimination of the test content, and to ensure the scientificity of the test questions to the greatest extent. Secondly, tabulate the two test scores of the experimental group and the control group, and compare the two average scores, supplemented by the distribution of each score segment of test 2, such as the median and mode, to confirm the hypothesis and draw conclusions. Finally, the questionnaire survey and interview method are combined, and then the results are analyzed and discussed.

##### 1.4 Result analysis

In the first test, the average score of the experimental group was 57.48; the average score of the control group was 61.42. The difference between the experimental group and the control group was 3.94 points. It can be seen that the basis of the experimental group was slightly inferior to that of the control group during the trace test. This shows that before the implementation of multi-modal teaching in the experimental group, the control group's performance is slightly dominant; in the second test, the average score of the experimental group is 72.46; the average score of the control group is 70.05, and the difference between the experimental group and the control group is 2.41 points. Through two tests, the average score of the experimental group increased by 14.98 points; the control group increased by 8.63 points. It can be concluded that in Test 2, the scores of the two groups have improved. Although the teaching methods used are different, after one semester of study, both groups have made considerable progress on the original basis. Obviously, the experimental group has made much greater progress than the control group, and there is a significant gap. Analyze the meaning of the difference in average score: The large difference indicates that English teaching based on multi-modality is more efficient. In other words, English teaching from a multi-modal perspective can better improve students' English learning ability. Therefore, it can be concluded that the teaching method based on multi-modality can effectively

promote the improvement of students' comprehensive English ability. After a semester of hard work, the experimental group, which was 3.94 points lower than the control group, had a significant improvement in test 2, and surpassed the control group. The reasons are as follows:

The ideographic system in the multi-modal context is three-dimensional and multi-dimensional. Teachers present their own teaching intentions to students in a multi-modal way, scientifically mobilize students' multi-modal cognitive mechanisms, and adjust students' multi-modal reception channels such as vision, hearing, and touch, so that they can understand the video material profound and rich connotation. In the interactive training context surrounded by sound, image, pictures, and text, rich cognitive materials can easily meet the cognitive needs of students and cause emotional resonance.

(2) A mature teaching environment integrates learning resources efficiently, and multi-modal teaching methods create a good and comfortable learning atmosphere for students. The multi-modal intervention enables students to learn new skills, learn to survive and benefit in a new environment, carry out creative activities, and be able to engage in learning easily, freely and happily, and get rid of the dilemma of "no rice in the pot" in English writing.

(3) The rich and colorful video materials effectively stimulate students' interest in learning, and strengthen their learning motivation imperceptibly. English teaching under the multimedia multi-modal perspective stimulates students' multiple senses with a large number of realistic learning materials at the same time, which reduces students' anxiety in English learning and mobilizes students' learning enthusiasm

to the greatest extent.

#### V. CONCLUSION

In summary, the introduction of multi-modality concepts into English teaching in higher vocational colleges stimulates students to open multiple senses at the same time and receive information through multiple channels, aiming to promote the improvement of learners' multiple literacy skills and the overall development of their personality. This requires teachers to follow the principles of science, practicability, assistance, simplicity and interactivity, consider students' cognitive laws, adapt to changes in students' cognitive methods in the hypertext era, improve the production level of multimedia courseware, and break through single text. The limitations of text classrooms build a multi-dimensional teaching environment.

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# Great Changes and China's Strategic Choice in the Influence of Global Economic Slowdown

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**Abstract:** The severe prevalence of the global economic slowdown has already caused a serious consequence for the global political and spiritual situation. Not only the individual property loss and irreversible psychological trauma, this negative economic trend also brought uncertainties of great powers structure and major power relationship. The vulnerability of the system of global governance certifies that the future global governance cannot simply rely on the European and American countries. On the base of strengthening comprehensive national strength, China should bear more responsibilities bravely and play a more important role in the process of global governance.

**Keywords:** the global economic slowdown; great powers structure ; global governance

The transition of the the global economic slowdown is still uncertain, but the damage and the side effect to global governance and the landscape of the world's development brought by The severe prevalence of the global economic slowdown are gradually obvious. Analyzing the influence brought by the global economic slowdown from the perspective of the macroscopic struggle and global governance is beneficial for us to realize the profound influence and change in China, and new challenge in China's international strategic environment accompanied by this pandemic that has not happened in a century.

The profound influence on the shape of the world brought by the the global economic slowdown

Since modern times, especially the two world wars that occurred in the 20th century, both of them have become accelerators for the contrast between great powers and the reshuffle of great power relations and structure. The first World War led to the defeat of the German Empire, and the disintegration of Russian, Austro-Hungarian and Osman empire. While the total economic volume of the United States exceeded Europe six years ahead of schedule (in 1919). The Second World War resulted in the defeat and surrender of German, Japan and Italy, the serious weakening of Britain and France, the formation of Cold War pattern between the two great camps led by the United States and the Soviet Union.

The global economic slowdown in recent years never contributes to the unreasonable application of gun or other weapons of mass destruction, but its wide range of spread and global involvement means that no

country is exceptional, which results in a serious wealth loss and psychological shock to most people. The global anti- slowdown activity is another form of "World War"—A new war between the individual region and the entire world. Under the influence of the global economic slowdown, the concepts of politics, culture, international relation and governance is experiencing a great change, which means the "soft power" contrast between China and the western powers is carrying out the transition to "global governance".

New Global governance under the leadership of G20 in the global economic slowdown

"Developing economies should provide clean water and sanitation for the poor, create safety nets, invest in health and education, and target energy and water poverty, Such a global strategy can revive economies, create jobs and improve the sustainability of world development." [1] The definition of global governance refers to the sum of the public affairs, global governance also has a wide range, from environmental and ecological crises to sustainable development, to interact with the new challenges accompanied by the COVID-19, global governance is urgent need of new spiritual connotation to lead people to cooperate with each other in the Post epidemic era. G20 members account for about 70% of the world's population, 80% of the total trade and 90% of the economy, "Globalization remains contested, and often misunderstood, with damaging real-world consequences" [2], G20 has the broadest representation that means it has the most accurate expression of the interest demands of the whole world, which plays an important role in the digestion of the misunderstanding towards the global governance. From the perspective of promoting global governance, the disastrous consequences brought by the COVID-19 shows the fact that only working together can the international community struggle for a bright future, it also shows that trade protectionism, unilateralism are unreasonable ideas in global governance.

"Institutional innovations such as greater transparency, institutional flexibility and construction of informal transnational networks may provide modest insurance against a weakening of global governance and its institutions." [3] The forces that really play a leading role in fighting COVID-19 are the effective institutions that offers flexible response

to global emergency such as WHO, G20 and China. All of these suggests that the responsibility of leading the future global governance should historically be handed over to the G20, in which China will play a greater role.

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# The Relationship between Perceived Usefulness or Perceived Risk and Online Shopping Intention in E-commerce

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Abstract: The research aims to find what the relationship between perceived usefulness or perceived risk and online shopping intention in e-commerce is. The research objectives are to find what PU and PR include and assess the relation between PU or PR and the willingness of buying goods online. The two research questions are ‘ What is the relationship between PU and this willingness of buying goods online in e-business?’ and ‘ How is the relation between PR and online purchase willingness in e-commerce?’. The background introduction of the study is stated initially. Also, questionnaire is the method of data collection. The model of measurement and structural model as the methods of data analysis detect the reliability and validity for actual data and ensure this correctness of previous hypotheses on two research questions. As for the final conclusion of this study, the PU is positively associated with OS intention in e-commerce. And PR and OS intention in e-business are negatively correlated.

Keywords: perceived usefulness, perceived risk, online shopping, intention, relationship.

## 1.INTRODUCTION

As the Internet develops, online shopping in e-commerce came into being. E-commerce is a business model based on the Internet platform where buyers and sellers directly conduct transactions online [1]. e-commerce has become an important outlet for China's economic transformation [2]. Nowadays, OS is becoming more and more prevalent. Projections about the sales from the internet show a growth of up to \$4.48tn by 2021 [3]. Perceived usefulness and risk, OS intention, and the relationship between the former and the latter have also been noticed. The perceived benefits and sustainable advantages of shopping online are summarized as PU [4]. PR is the consumers’ perception on adverse outcomes of buying a product or service online [5]. OS intention is the willingness of online shoppers to buy goods and services via the internet or virtual shopping carts [6]. And PU could change consumers’ attitudes toward purchasing online [7]. The main reason for their reluctance to complete online ITP purchases is risk concerns [8].

## 2.RESEARCH METHODOLOGY

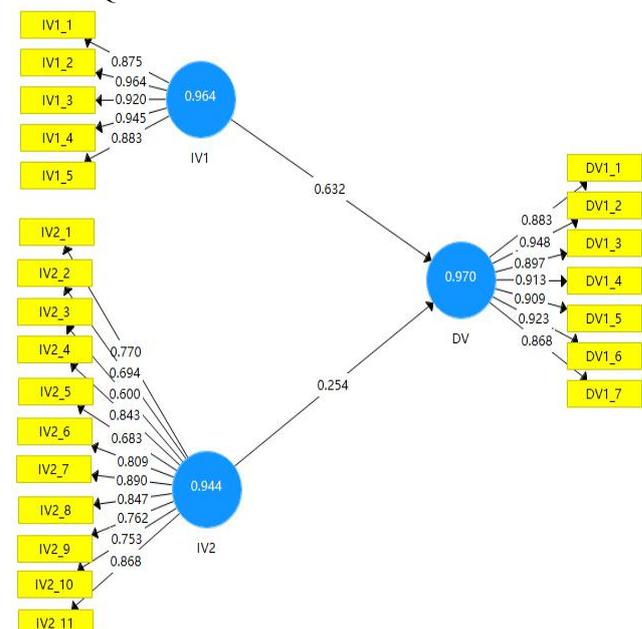
The research is a quantitative research. Hypotheses development was established initially. The first hypothesis is that PU is positively associated with the willingness of buying goods online in e-commerce. The second one is that PR and online purchase willingness in e-business are negatively correlated. Secondly, actual data was collected by questionnaire as the method of data collection. This sample for research is 33 respondents who are willing to participate in this questionnaire. 4 questions about personal situation, 5 questions about perceived usefulness, 11 questions about perceived risk, 7 questions about intention to shop online and responses from participants constituted these data. In the end, this study used the software of IBM SPSS Statistics and Smart PLS to analyze data and drew conclusions. And the method of data analysis was the use of measurement model and structural model.

## 3. RESULT AND DISCUSSION

### 3.1 Measurement and Structural Models

The model of measurement was to test the validity and reliability of this data. And structural model was to test two research hypotheses above. After imported the questionnaire data from IBM SPSS Statistics to Smart PLS, table 1 was created.

Table 1 Questionnaire Data



3.1.1 Measurement model

Validity Analysis

Table 2 Analysis

Vari-ables	Cronbach's Alpha	rho_A	Compo-site Reliabi- lity	Average Variance Extracted (AVE)
DV	0.964	0.965	0.970	0.821
IV1	0.953	0.955	0.964	0.842
IV2	0.934	0.946	0.944	0.607

Table 3 Fornell and Larcker criterion

Variables	DV	IV1	IV2
DV	0.906		
IV1	0.813	0.918	
IV2	0.704	0.712	0.779

The actual data collected for this research have met the criteria of validity. Table 2 shows all the AVE results which exceed 0.5 for the variables are not a concern. And the table 3 indicates that the correlation on the off-diagonal is lower than the squared root of AVE on the diagonal. Therefore, the discriminant validity criterion is achieved.

Reliability Analysis

Table 2 shows the data are also reliable. All the composite reliability results exceeding 0.7 for the variables are qualified.

3.1.2 Structural Model

Collinearity Statistics (Inner VIF Values)

Table 4 Statistics

Variables	DV
IV1	2.031
IV2	2.031

All the inner VIF values for IV1 and IV2 in table 4 are less than 3.3 and 5.0. Therefore, all these values are qualified.

VIF - variance inflation factor

1th criteria-3.3

2nd criteria-5.0

Table 5: Path Coefficients

Variables	Original sample (O)	Sample mean (M)	Standard Deviation (STDEV)	T statistics ((O/STDEV)	P values
IV1→DV	0.632	0.602	0.125	5.071	0.000
IV2→DV	0.254	0.284	0.138	1.842	0.033

Note: Original sample (O)-path coefficient  
Table 5 indicates the essential of IV1 and IV2 in

predicting the dependent variable is evidenced. IV1 (0.632) is the more important predictor.

Table 6 R square result

Variable	Result
DV	0.693

Table 6 shows the R-square value (0.693). This means IV1 and IV2 explain around 69.3 percent of variance in DV.

Table 7 f square results

Variables	DV
IV1	0.641
IV2	0.103

0.35-substantial influence size

0.15-medium influence size

0.02-small influence size

That IV1 (0.641) has a very substantial effect size in producing R<sup>2</sup> for DV is illustrated. And IV2 has a medium effect size.

Table 8 : Predictive relevance Q<sup>2</sup>

Variab-les	SSO	SSE	Q <sup>2</sup> (1-SSE/SSO)
DV	231.000	110.391	0.522
IV1	165.000	165.000	
IV2	363.000	363.000	

The Q<sup>2</sup> (0.522) means there is predictive relevance based on the DV for this model. That it is greatly above 0 is the justification.

Table 9: Hypotheses testing

Hyp- othe- ses	Relatio- nship	Std beta	Std error	T valu- e	P val- ue	Deci- sion
Ha1	IV1→ DV	0.632	0.125	5.071	0.000	Supp- orted
Ha2	IV2→ DV	0.254	0.138	1.842	0.033	Supp- orted

Note: p value < 0.05 = significant

The one-tailed testing is selected to use. Ha1's p value-0.000 is less than 0.05. It is significant. Therefore, Ha1 is valid in this study. Ha2's p value-0.033 is also less than 0.05, which is significant. Thus, Ha2 is also supported in this study.

3.2 Discussion

Consumers think the PU of buying goods online includes time saving and efficiency improvement according to the responses from the sample. Nowadays, in this fast-paced society, people are busy, especially those in big cities. As to the tenable Ha1, people as consumers are more willing to buy things

through online when OS can save time and improve their efficiency better. Greater PU, greater willingness to shop online. According to the result of the questionnaire, some people worry that online payment is not safe. They think that personal information can be leaked during OS. These cause them to reduce their willingness to shop online. Greater PR, less OS intention. As for the correct Ha2, it is also supported by the previous research view. Perceived risks of OS, such as low product quality, poor after-sales service and breach of privacy, inhibited buyers' purchase intention [9].

#### 4. CONCLUSION

In conclusion, the research illustrates the relation between PU or PR and the willingness of buying goods online in e-business. PU is positively associated with OS intention. And PR and OS intention are negatively correlated.

#### V. Acknowledgement

This research was supported by these participators due to their serious and effective answers. Thanking them for their willingness to fill out the questionnaire.

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# Practical Significance and Implementation Path of Strengthening Etiquette Cultivation Education for College Students

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**Abstract:** China has been a land of etiquette since ancient times, and the ancients also paid special attention to etiquette in daily life, but these excellent traditional cultures are gradually being abandoned today. I think it is due to the influence and infiltration of foreign culture, especially in today's young generation. Although some college students have solid discipline literacy, they do not have etiquette cultivation. Therefore, it is urgent to strengthen the etiquette cultivation education of college students, because etiquette is the code of conduct of people in the process of communication. Good etiquette will make each other feel like spring breeze, lay a solid foundation for the subsequent employment life, and should become the expression of College Students' Ideological and moral character and quality cultivation.

**Keywords:** strengthening; college student; Etiquette cultivation education; Practical significance; Implementation path

## 1. INTRODUCTION

Universities are the places where students receive higher education, the cradle of cultivating China's higher talents, and the foundation of the future of the motherland. They ultimately want to enter the society and become part of all walks of life, representing the humanistic spirit of each university. However, current universities ignore the etiquette cultivation education for students and focus more on academic education. Professional knowledge is important, but if a student only has professional knowledge but does not have good moral quality, I think this is not the talent needed by our times. It is easy to produce the situation of moral mismatch. We can often see from various mass media that many students from famous universities have profound cultural knowledge but do not have a good etiquette cultivation. Therefore, relevant colleges and universities should pay more attention to students' etiquette cultivation education, so that students can have both academic quality and good moral quality, and become excellent talents with both political integrity and talent. Next, this paper will briefly analyze the importance of Strengthening College Students' etiquette cultivation education, and put forward specific implementation strategies for relevant personnel for reference, So as to promote the

development of College etiquette cultivation education in China.

## 2. PRACTICAL SIGNIFICANCE OF STRENGTHENING ETIQUETTE CULTIVATION EDUCATION FOR COLLEGE STUDENTS

(1) It is helpful for college students to establish good interpersonal relationships

When students were in college, they would eat, wear, live and travel on campus. These four years have been like a small society. Strengthening etiquette cultivation education is conducive to helping students establish good interpersonal relationships. Why do you say so? Because spears and shields appear repeatedly in current university dormitories. In the final analysis, they are all small things, that is, students lack the most basic etiquette. For example, some students still play music and videos when others are sleeping, and often quarrel with their roommates. Especially in the girls' dormitory, the "brilliance" is no less than that of Zhen Huan Chuan. If even the most basic interpersonal relationship is not good, how can students stand in society? Sometimes, as long as we tolerate and understand others, things will be solved. However, it is precisely because of the lack of basic etiquette cultivation that eventually evolved into a quarrel. There was Ma Jiajue's murder before and Fudan poisoning after. Therefore, there has been an effective etiquette cultivation education. I believe that some current phenomena will be alleviated and help students build good interpersonal relationships.

(2) It is conducive to improving the comprehensive quality of college students

With the continuous implementation of the new curriculum reform and the continuous development of quality education, the simple learning index is no longer the mainstream student education goal, but changes to pay attention to the all-round development of students. A person's etiquette cultivation has a very important impact on himself or others in the common environment. For himself, it is conducive to improving his moral quality, and for others, it is conducive to making others feel respect. Therefore, under the current quality education, college students not only need to master professional quality, It is also necessary to have good etiquette cultivation while mastering professional quality, which requires

relevant colleges and universities to pay attention to guiding students to establish a positive learning attitude and life attitude in their daily work, and cultivate a correct outlook on life. Etiquette cultivation education covers a wide range of contents. Therefore, counselors should consciously strengthen students' Ideological and moral quality, let students establish bottom line awareness, have a clear understanding of relevant national laws and regulations and good social order, and pay attention to students' psychological counseling, so as to improve the comprehensive quality of Chinese College students, Become an excellent talent with all-round development.

(3)It is conducive to improving China's social atmosphere

In recent years, China's economic development has continued to grow. In the process of rapid economic growth, many European and American cultures and Japanese and Korean cultures have impacted on China's social atmosphere. Under the impact of these cultures, society has bred some bad atmosphere and ugly phenomena. Even these phenomena have had a great impact on China's college students. Take the epidemic situation last year for example, What two people have done is really heartbreaking. One is that foreign students, on the one hand, wantonly insult our motherland in social software, on the other hand, are still asking when we can pick her up. I think the significance of our higher education is to make our motherland better, not to insult and dislike her, and the overseas executives of a large enterprise, After returning to China for refuge, they completely ignored the dissuasion of the staff and went out to walk the dog without wearing a mask. Recently, after China's young diver Quan hongchan got full marks in diving, many people went to the door for live broadcasting for profit regardless of the body and age of their parents and grandmother. Is this a good social atmosphere, It is the lack of basic etiquette literacy that breeds these chaos, and college students are the hope and foundation of our country in the future. Only by improving college students' etiquette cultivation education can we fundamentally control these chaos, so as to promote China's economic development, improve China's etiquette cultivation and inherit China's excellent tradition.

### 3.THE IMPLEMENTATION PATH OF STRENGTHENING COLLEGE STUDENTS' ETIQUETTE CULTIVATION EDUCATION

(1)Bring etiquette education into students' compulsory courses

The first thing to do to improve college students' etiquette cultivation education is to incorporate etiquette education into university courses and make it a compulsory subject for each major. Although China has also carried out corresponding etiquette education, it does not recognize the importance of etiquette education, but puts it in the position of

elective subjects, and colleges and universities and teachers do not pay attention to it, As a result, the opening of this course is like a dummy. Teachers talk about their own on the podium. Students play mobile phones, sleep and make trouble below. Teachers leave when they hear the bell. Students may not even open their books. Etiquette courses are like a dummy. Therefore, colleges and universities should incorporate etiquette cultivation education into the compulsory subjects of college students, improve their credit points, and pay more attention to the final examination. The specific measures are as follows: first, colleges and universities can set up different etiquette courses according to students' ages and majors, improve teaching plans and build a scientific curriculum system, So as to help college students establish a correct sense of etiquette, effectively restrict their behavior, and lay the etiquette foundation for campus life and future career.

(2)Construction of school etiquette education website

In addition to bringing etiquette cultivation education into the required courses of universities, relevant personnel should also give full play to the advantages of science and technology. In today's big data era, colleges and universities can establish a etiquette education website to better cultivate students' etiquette cultivation. Building a school etiquette education website is the development trend of the times, It can not only provide students with convenient teaching channels for learning etiquette cultivation, but also enable etiquette teachers to carry out etiquette education for students more efficiently. After setting up the etiquette cultivation education website in the school, it can be promoted by means of teachers' notification, so that students can learn the basic knowledge and information of etiquette at any time on the etiquette cultivation website. Etiquette teachers can also regularly push the latest stories about etiquette cultivation on the website. Telling these stories is divided into different plates to facilitate students to browse and find them quickly. At the same time, we can also set up a etiquette video channel to upload the videos and deeds about etiquette cultivation we encounter in life to the website. So as to improve the teaching quality of etiquette education in Colleges and universities, better promote students to improve their personal etiquette cultivation, and provide more high-quality talents for the society.

(3)Regularly hold the main activities of campus etiquette culture

Strengthening the etiquette cultivation education of college students does not necessarily mean that the above methods and methods are needed. The etiquette cultivation of college students can also be improved by carrying out the main activities of etiquette culture. For example, etiquette knowledge lectures and etiquette debate competitions can be carried out. At the same time, dramas and sketches

can be written with etiquette as the theme, and etiquette knowledge can be spread in a way loved by college students, In this way, it can not only stimulate students' interest in participation and enrich campus life, but also effectively carry out etiquette cultivation education, make students realize the impact of etiquette cultivation on themselves, others, parents and society, so as to recognize etiquette cultivation from the depth of their heart. At the same time, colleges and universities can also integrate etiquette education into some traditional major holidays, such as teacher's day, mother's day, Dragon Boat Festival and other activities, infiltrate etiquette education through the festival atmosphere, so that college students can clearly feel the etiquette existing in life, so as to better carry out etiquette education.

#### 4.SUMMARY

To sum up, etiquette cultivation is a very important quality for each of us. The development of society needs university education, but social development includes not only science and technology economy, but also human civilization. We can't abandon Chinese traditional virtues in the process of economic development. Therefore, we should recognize the importance of etiquette cultivation for college students, It can not only promote the development of their comprehensive quality, but also effectively

improve the ability of college students to establish interpersonal relationships, which is of great help to future employment and life. At the same time, etiquette cultivation education can not simply rely on university education, but also carry out corresponding etiquette education in high school, junior middle school and even primary school, So as to promote the common development of China's material civilization and spiritual civilization.

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# World Unity beyond Time and Space: An Analysis of “Crossing Brooklyn Ferry”

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**Abstract:** Walt Whitman (1819-1892) published “Crossing Brooklyn Ferry” in 1856. In this poem, the poet celebrates the world’s interconnection among common people through the poetry structure of a spiral cyclone. Whitman expresses his observations and thoughts of nature and longing for world unity of global brotherhood when crossing Brooklyn Ferry, connecting the past and the future with the poem itself.

**Keywords:** World unity; Time and space; Walt Whitman; Crossing Brooklyn Ferry

## 1. INTRODUCTION

“Crossing Brooklyn Ferry,” once named “Sun-Down Poem,” is written by American poet Walt Whitman. Focusing on the collective experience and shared feelings among Whitman and other people when crossing the Brooklyn Ferry, the poem is a detailed record and a call for world unity of global brotherhood, containing his panoramic observations with the length and breadth of both time and space within the poetry structure of a spiral cyclone. Ma Te (2011) considers that Whitman applies a technique of spatialization in this poem, creating a spiral circular space based on the main body of the third and the ninth stanzas (102). But this interesting perspective ignores other part of the poem, which lacks a sense of continuity. A more detailed spiral poetry structure will be discussed in this paper and the connections among world unity and the structure will be analyzed as well.

## 2. POETRY STRUCTURE: A SPIRAL CYCLONE

“Crossing Brooklyn Ferry” has a passionate spiraling cyclonic structure, carrying both time and space dimensions while the poem develops with different line lengths and line numbers. The nine stanzas in total can be divided into three parts, and each part includes three stanzas which forms a smaller cyclonic structure containing more and longer lines, constructing an inner space in each smaller part and a larger cyclonic space through the whole poem. Moreover, as it develops with Whitman or read by readers, time goes by, and the poem itself forms a time dimension of linear development as well. Therefore, “Crossing Brooklyn Ferry” is a poem that develops from a small entrance to a much larger exit with a trend of ascending development like a spiral with no end.

## 3. WORLD UNITY WITHIN THE CYCLONE

Both detailed records of Whitman’s experience and thoughts and the poetic devices in “Crossing Brooklyn Ferry” express the sense of time and space as well as Whitman’s expectation towards world unity of global brotherhood.

### (1) Whitman’s longing for world unity

The poem’s detailed description narrates Whitman’s desire for world oneness around the Earth. All three parts of the poem convey Whitman’s love for his people. In the first part, the poet shows his curiosity about men and women in the cities and a strong desire to learn more about them, then Whitman gives a rather plain but detailed description of what people can see when they cross the Brooklyn Ferry which is part of shared experience among people who has crossed a ferry. The second part mainly focuses on the universality of human experience and feeling, bringing the idea that there is no spiritual distance between two people. The poet’s love for the world and its people beyond time and space is roaring in the third part. So, these three smaller cyclones form a progressive cyclonic structure that conveys Whitman’s thoughts step by step and is more useful for persuading the readers into believing the possibility of world unity.

### (2) World unity with poetic devices

With the help of poetic devices, “Crossing Brooklyn Ferry” presents Whitman’s longing to connect with the world, including repetition with fluctuating tones and various punctuations. Nearly all the stanzas apply repetition with a tone of ups and downs, strongly emphasizing the poet’s growing emotions when thinking of the shared experience of crossing the Brooklyn Ferry that connects him and the others and the possibility of global unity. For instance, in the second stanza, Whitman uses four “Others will” [1] to describe what other people will also do and see when crossing the ferry as he has (13-16). The rising tone of “Others will” makes readers looking forward to the upcoming brief trip on the Atlantic Ocean, while the long vowels of “shore,” “flood-tide,” “heights,” and “small” construct a choppy sound effect which makes readers feel as if they were crossing the ferry and hearing the flood-tide when reading aloud (13-16).

Whitman also uses different punctuations to express his feelings in different parts. At the beginning and the end of the poem, Whitman adopts the

exclamation to indicate his curiosity about other people in the world and his joy of believing world solidarity. The poet uses many dashes to further explain his ideas, such as “Others the same—others who look back on me because I look’d forward to them,” which shows his expectations and determined belief in the common people (51-52). The poet also raises 14 questions about the relationship between him and other people, including strangers on the street and readers, through the poem, two in the fifth stanza, three in the seventh stanza, and nine in the eighth. More questions emerge as the poem progresses, focusing on the world to the soul, which urges readers to ask themselves those questions and to think carefully about their relationship with the rest of the world. Therefore, those punctuations mentioned above carry Whitman’s desire to connect with his people.

#### WORLD UNITY BEYOND TIME AND SPACE

Walt Whitman yearns for global brotherhood and he embraces all, love or hatred, happiness or sorrow, as whispering “I am large, I contain multitudes” in “Song of Myself, 51” (line 8).

##### (1) World unity beyond time

“Crossing Brooklyn Ferry” is a poem beyond time that connects Whitman with his readers over a century.

For one thing, different points in time in this poem are interwoven, including the present and the future, such as “sun there half an hour high,” and “a hundred years hence, or ever so many hundred years hence” (2, 18). It is a very tricky way of communication. Because with these marks of time, Whitman can talk with his readers and asks them those questions, then readers reflect on the poet’s thoughts and have their answers, which is a conversation between Whitman and his people over a century or even more. He mentions these times to work as a bridge, connecting himself with the present world and the future one and expressing his love and concern to the globe and its unity regardless of time limitation, like “a timeless voyage of being” (Orlov, 12).

For the other thing, feeling is universal, so people a hundred years later will have a similar feeling and experience in the same place. In other words, what the poet sees, hears, and feels on the ferry-boat when crossing the ferry is universal. Whitman’s poem can produce sympathy beyond people all over the world and beyond hundreds of years. On the ferry-boat, people seem to see the same “Twelfth-month sea-gulls” whirling in the sky and the same clouds of the west, and people can also see “shipping of Manhattan north and west” and “the heights of Brooklyn to the south and east” (15-16, 28). The scenery is always there, and Whitman and people share a similar experience in his times and at present.

“Crossing Brooklyn Ferry” is a poem beyond the time barrier.

##### (2) World unity beyond space

“Crossing Brooklyn Ferry” is also a poem beyond space that connects Brooklyn Ferry with the rest of the world with the help of collage and common words.

Whitman uses collage to join several locations and things together, structuring a vivid picture of the Brooklyn Ferry. At the beginning of the poem, he sets the ferry position as a starting point and frequently switches the position to extend the breadth and depth of the space. For example, the description of “the shipping of Manhattan north and west,” “the heights of Brooklyn to the south and east,” and “islands large and small” implies that the ferry-boat is on the East River (15-17). Whitman describes the floating “Twelfth-month sea-gulls” high in the air with “the glistening yellow lit up parts of their bodies and left the rest in strong shadow,” then their “slow-wheeling circles and the gradual edging toward the south” shows that the sea-gulls are flying away (28-31). This is a near-to-distant as well as point-to-whole depiction (Ma, 100). All these pieces of scenery present different perspectives of Brooklyn and Manhattan, enabling different readers to connect their impression on the cities with Whitman’s one, promoting the progress of world oneness.

#### WALT WHITMAN: A POET OF THE WORLD

With the help of a spiraling cyclonic structure, detailed description, repetition, fluctuating tones, different punctuations, and collage, Walt Whitman passionately conveys his deep love for his world and common people step by step, creating an interconnection with the peaceful world through his words. Whitman celebrates the ideals of world oneness with his attempt of sharing a common experience beyond time and space with his people, helping readers find their identities as a member of the world community through being touched by the poem.

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# Preparation and Process Optimization of Eucommia Ulmoides Gum-Based Shape Memory Materials

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**Abstract:** The sulfur system of conventional unsaturated rubber can be used to vulcanize and cross-link Eucommia ulmoides gum (EUG) moderately and destroy its partial crystallization. By adjusting the ratio of crystallinity and cross-linking degree, EUG can be made into thermotropic shape memory materials which respond to different temperatures, and the optimal formula was selected by orthogonal design. The EUG-based shape memory materials were prepared with this formula have a thermal stimulation memory execution temperature close to the normal body temperature and good shape recovery capability, which will be expected to be used as a pressure-sensitive adhesive material for transdermal drug delivery systems (TDDS) under human physiological conditions.

**Keywords:** Eucommia ulmoides gum; Shape memory material; Process optimization

## 1. INTRODUCTION

Thermotropic shape memory polymer material is a kind of functional materials that can respond to temperature changes and adjust itself to deform, which has a two-phase structure, namely a stationary phase and a reversible phase [1]. When it is heated to a certain temperature, an external force is applied to deform it, and it is cooled rapidly in the deformed state to freeze the stress; When it is heated above a certain temperature again, the stress of the material will be released, which will make the material automatically return to its original state. EUG is a kind of natural rubber derived from the leaves, fruits, barks and roots of *Eucommia ulmoides* Oliver, and its yield is abundant. Although it has the same chemical composition (C<sub>5</sub>H<sub>8</sub>)<sub>n</sub> as ordinary natural rubber, it is trans-polyisoprene structure, which has unique "rubber-plastic duality" [2], and has plasticity and high elasticity, and its melting point is about 60°C. It has been successfully applied to medical gypsum substitute, medical orthopedic material, drug sustained-release material [3].

## 2. EXPERIMENTAL

### 2.1 Materials

EUG (>94%) was purchased from Lueyang Jiamu *Eucommia ulmoides* industry Co., Ltd., Shaanxi Province, China. Zinc carbonate and talc were purchased from Tianjin Recovery Fine Chemical

Research Institute, Tianjin, China. Sulfur and titanium dioxide were purchased from Zhejiang Yinuo Biotechnology Co., Ltd., Zhejiang Province, China. zinc diethyldithiocarbamate (ZDC) and N-cyclohexylbenzothiazole-2-sulphenamide (CZ) were purchased from Wuhan Lanabai Medicine Chemical Co., Ltd., Hubei Province, China.

### 2.2 Technological formula

The basic formula: EUG 1 g, zinc carbonate 0.02 g, talc 0.15 g, sulfur 0.02 g, accelerator 0.005 g, titanium dioxide 0.15 g.

### 2.3 Preparation process

Mixing process [4]: At about 80 °C, EUG was added and mixed for about 5 min. After the rubber was completely softened, talc, titanium dioxide, accelerator (ZDC/CZ), zinc carbonate and other ingredients were added successively, and then sulfur was added, which was evenly mixed and vulcanized at 150 °C for 30 min.

### 2.4 Measurement of shape recovery rate of the materials

After marking a marking line with a pitch of L<sub>0</sub> on the sample, which was fixed between stretching jigs, raised the temperature to 60 °C in a uniform temperature field, kept the temperature constant for 5 min, and then the sample was stretched along the direction of gauge distance by L<sub>a</sub>, kept the external stretching force to cool quickly at room temperature, and then the deformation was fixed, removed the external force, measured the distance L<sub>b</sub> between the two marking lines, and put into a uniform temperature field with the temperature of 60 °C. At this time, the measured distance between the two lines was L<sub>c</sub>, and the shape recovery rate (R<sub>r</sub>) was calculated using [5]:

$$R_r = (L_c - L_0) / (L_b - L_0) \times 100\%$$

### 2.5 Measurement of thermal stimulation memory execution temperature of the materials

The sample was cut into small strips with a length of 30 cm and a width of 5 mm, and stretched to the maximum yield length in a water bath at about 70 °C, and then the sample was quickly cooled while maintaining the external force, and the deformation was fixed, put into a room temperature water bath, hanged 1 g weight, and a heating rate of 1 °C/min. The retraction temperature of the sample was observed, which was measured three times for each

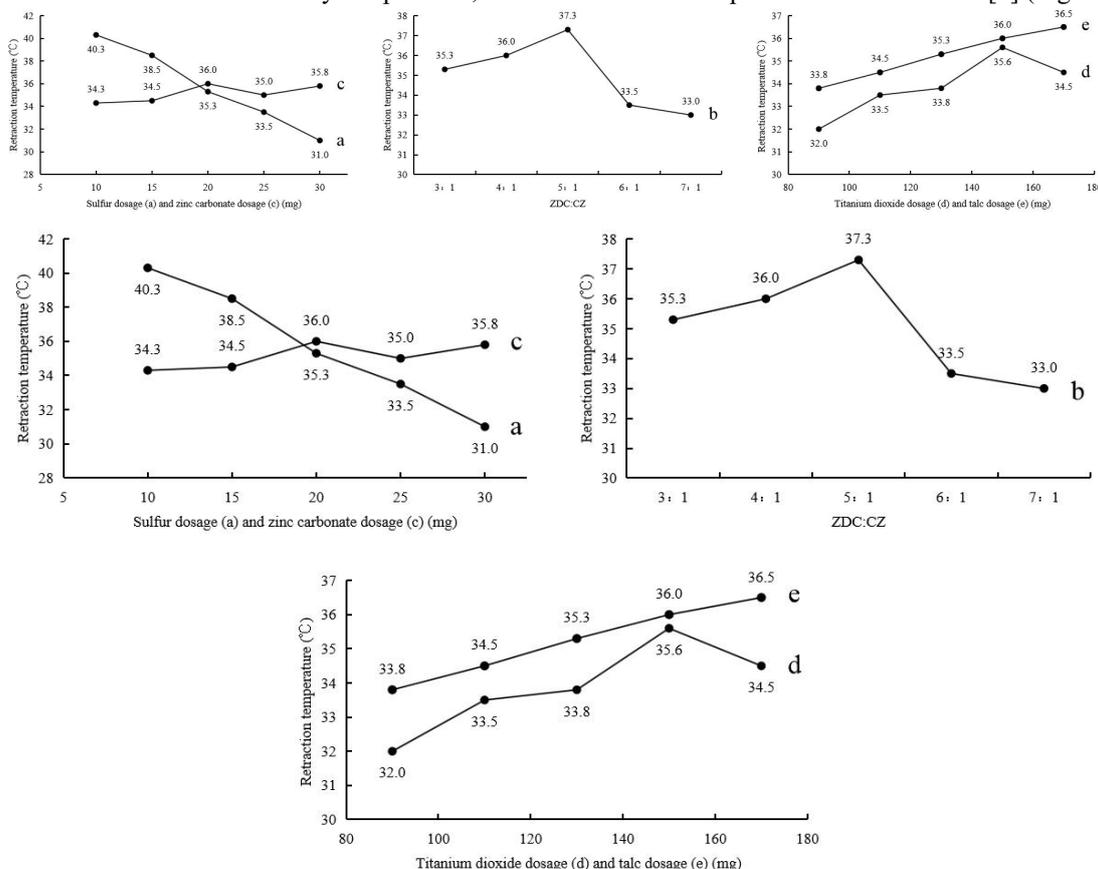
sample, and the average value was the thermal stimulation memory execution temperature of the sample.

### 3. RESULTS AND DISCUSSION

#### 3.1 Analysis of single factor experimental results

When sulfur was added to EUG, the linear trans-polyisoprene molecules were cross-linked into a network structure under heating condition, with the increase of sulfur consumption, the proportion of s-s-bonds in the chain structure increased directly, which led to the increase of crosslinking density, hindered the movement and crystallization ability of molecular segments [6], also obviously increased the proportion of amorphous regions resulting in the decrease of crystallinity, induced the decrease of thermal stimulation memory execution temperature (Fig. 1a). In order to ensure the safety of vulcanization operation and scorching property of the rubber compound, therefore we chose ZDC and CZ as mixed crosslinking accelerators. With the increase of the feed ratio of ZDC to CZ, the thermal stimulation memory executive temperature of the material first increased and then decreased (Fig. 1b). When the feed ratio of accelerant was from 4:1 to 5:1, the thermal stimulation memory executive temperature of the material was from 36 °C to 37 °C, which was close to the normal body temperature, and

had good effect. In order to improve its shape stability and remove H<sub>2</sub>S gas generated during vulcanization, a certain amount of zinc carbonate was added that improved the thermal conductivity and vulcanization speed of the rubber compound. However, with the increase of zinc carbonate dosage, the thermal stimulation memory execution temperature of the material had no obvious change (Fig. 1c), which probably related to the fact that zinc carbonate could improve its thermal conductivity. At the same time, we added titanium dioxide to improve the appearance of EUG-based shape memory material and prevent its oxidation. With the increase of titanium dioxide dosage, the thermal stimulation memory execution temperature of the material increased slightly (Fig. 1d), but the reason of its effect on the thermal stimulation memory execution temperature of the material was not clear [7], which might be that its addition plays the role of some nucleating agent and promoted the formation of crystallization, thus increased the thermal stimulation memory execution temperature of material. Of course, in order to ensure the complete vulcanization of EUG, we added talc as a reinforcing filler. Compared with other factors, the change of talc dosage had no obvious effect on the thermal stimulation memory execution temperature of the material [8] (Fig. 1e).



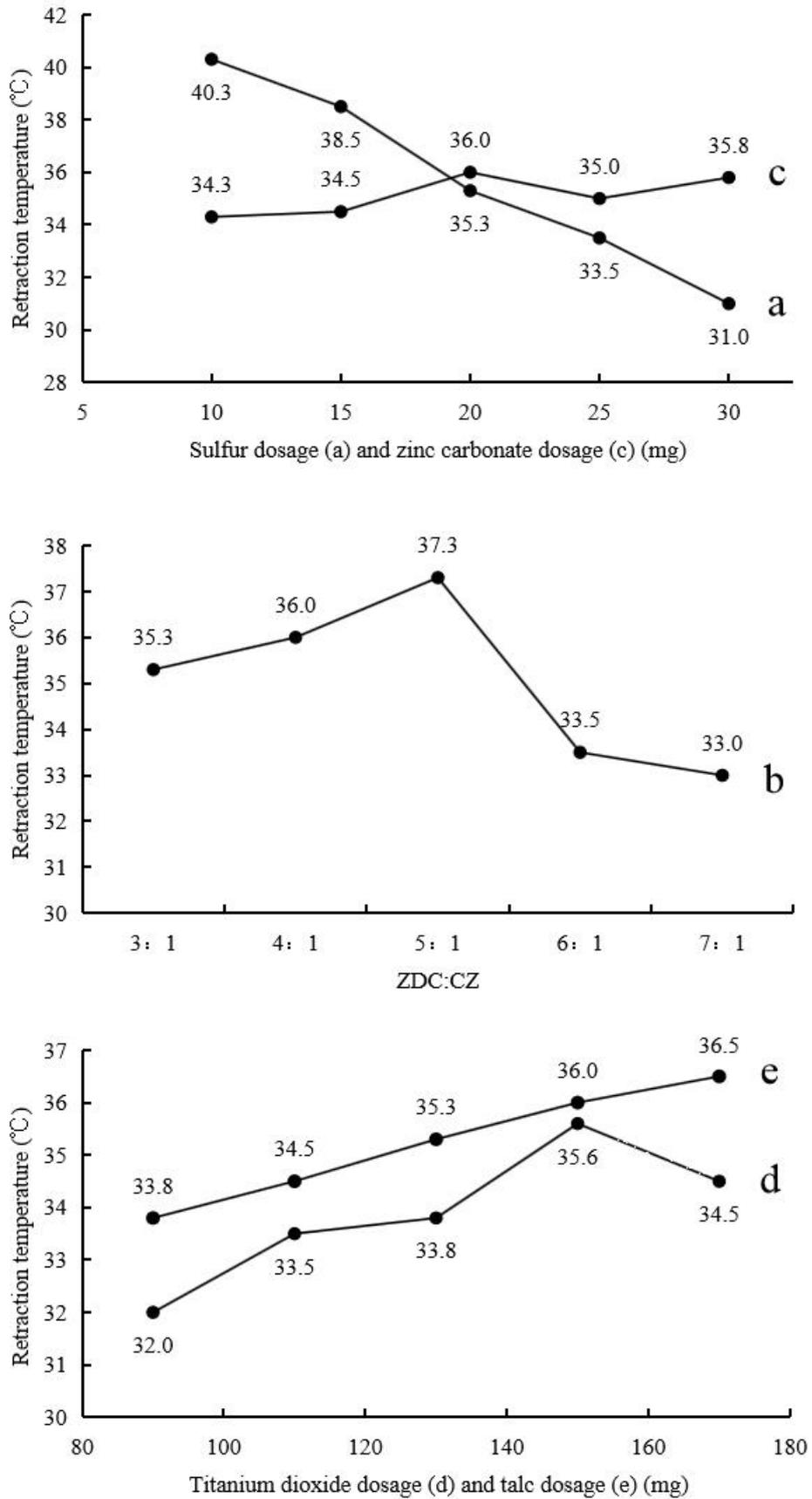


Fig. 1. The effect single factor on the thermal stimulation memory execution temperature of the materials

3.2 Orthogonal experimental design and result analysis

Titanium dioxide dosage and talc dosage were 150 mg, and sulfur dosage (A) , accelerator ratio (B) and zinc carbonate dosage (C) were taken as three factors, whose three different dosages of each factor were

taken as three levels respectively, so the orthogonal experiment of the three levels of the three factors was designed. The main factors and their levels were shown in Table 1, and the experimental results were shown in Table 2.

Table 1. Factors and levels of orthogonal experiment

Levels	Factors		
	A Sulfur dosage (mg)	B Accelerator ratio	C Zinc carbonate dosage (mg)
1	18	4:1	15
2	20	5:1	20
3	22	6:1	25

Table 2. Orthogonal experimental design and analysis results

Batch	Factors			Response rate (%)	Retraction temperature (°C)
	A	B	C		
1	1	1	1	97.1	35.0
2	1	2	2	96.8	37.0
3	1	3	3	97.2	36.0
4	2	1	2	96.9	35.5
5	2	2	3	97.6	35.0
6	2	3	1	95.9	36.5
7	3	1	3	96.1	33.0
8	3	2	1	93.6	32.5
9	3	3	2	96.3	32.0
Response Rate	K1	97.03	96.70	95.53	
	K2	96.80	96.00	96.67	
	K3	95.33	96.47	96.97	
	R	1.70%	0.23%	1.44%	
Retraction temperature	K1	36.00	34.50	34.67	
	K2	35.67	34.83	34.83	
	K3	32.50	34.83	34.67	
	R	3.50%	0.50%	0.17%	

For the shape memory polymer materials, the higher shape recovery rate was, the stronger its ability to keep shape would be, and the more beneficial it was to its application. Therefore, according to the analysis of orthogonal experimental results (Table 2), the best experimental scheme of combining the optimal levels of various factors was A1B1C3.

As this material will be applied to human body as TDDS pressure sensitive adhesive material, the thermal stimulation memory execution temperature of the material should be close to the normal body temperature. And consequently, It could be seen from

Table 2 that the best experimental scheme of combining the optimal levels of all factors was A1B2C2 or A1B3C2.

3.3 Determination of final experimental scheme  
According to the orthogonal experimental optimization schemes A1B1C3, A1B2C2 and A1B3C2, three batches of samples were prepared for each scheme, and the thermal stimulation memory execution temperature and the shape recovery rate of the three batches of samples were measured respectively. The results were shown in Table 3.

Table 3. The results of thermal stimulation memory execution temperature and shape recovery rate of each batch of sample in each scheme

Samples	Retraction temperature (°C)			Response rate (%)		
	1	2	3	1	2	3
A1B1C3	35.0	35.5	35.0	95.2	95.8	97.4
RSD (%)		0.83			1.18	
A1B2C2	36.5	36.5	37.0	95.7	97.1	98.1
RSD (%)		0.79			1.24	
A1B3C2	35.5	36.0	36.5	96.4	97.5	97.2
RSD (%)		1.39			0.59	

According to the above experimental results, the thermal stimulation memory execution temperature of the three batches of samples were prepared according to the prescription A1B2C2 was closest to the normal body temperature, and the mean value of shape recovery rate was 97.0%, and the variance was less than 2%, which indicated the experiment reappeared well.

#### 4. CONCLUSIONS

The technological formula optimized by orthogonal design was composed of sulfur 18 mg, accelerator ratio 5:1 (ZDC 4.17 mg, CZ 0.83 mg), zinc carbonate 20 mg, titanium dioxide 150 mg and talc 150 mg. The thermal stimulation memory execution temperature of the sample prepared with the optimal formula was about 37°C, and the shape recovery rate of the material was good, which improved the performance of EUG. Overall, the research on the preparation and process optimization of *Eucommia ulmoides* gum-based shape memory materials laid a foundation for further using it as pressure sensitive adhesive material for TDDS. However, the feasibility and safety of the materials should be further studied.

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# Research Progress and Prospects of Technology of Electronic Stability Program Driven by Wire

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**Abstract:** With the development of information technology and people's expectations for a happy life in the future, people have higher requirements for the performance of all aspects of automobiles. Safety, environmental protection and comfort of automobile development have become the main directions of the development of the automobile industry. Among them, modern automobile control technology is developing in the direction of wire control technology, and the traditional technology with liquid and machine is being replaced. The technology of electronic stability program is an important part of the wire-controlled car, which provides a guarantee for the automation, intelligence and safety of the wire-controlled car. This paper studies the current development status of wire-controlled electronic stability program, analyzes the related technologies of wire-controlled automobile, and finally puts forward the prospect of the control technology in the future, so as to provide certain help to the development of wire-controlled automobile in the future.

**Keywords:** Wire-controlled car; Technology of electronic stability program; Research progress; Prospect

## INTRODUCTION

In recent years, the development of science and technology has brought wire-controlled cars to our lives and provided a direction for the future development of the automobile industry. The development of wire-controlled cars in China's automobile industry is far less than that of developed countries in terms of automobile. The reason is that developed countries are more advanced in technology of electronic stability program than China. In current automobiles, wire-controlled accelerators, wire-controlled shifts, and wire-controlled hydraulic brakes have all been applied to wire-controlled automobile technology, and meet people's needs for car safety and comfort. In addition, it has certain benefits to the safety and intelligence of the car itself. Wire-controlled technology has great potential in automotive technology. In order to enable the wire-controlled car to achieve greater development, we still need to devote a certain amount of effort to the development of technology of electronic stability

program.

## 1. THE SITUATION OF TECHNOLOGY OF ELECTRONIC STABILITY PROGRAM DRIVEN BY WIRE

The development of wire-controlled automobile technology in China is relatively short, which is not optimistic compared with other developed countries. In the 1950s and 1960s, American suppliers and German companies conducted research on how to directly control the steering wheel and the wheels with control signals. Benz in Germany began to conduct in-depth research on the front-wheel steering system after 1990. And in the following decades, BMW in Germany, Berstone in Italy, and Toyota in Japan have all conducted related research and produced related wire-controlled cars. In addition, Citroen in French, Hyundai and Kia in Korea have successively introduced concept cars with new control technology. They use wire-controlled technology both on the rotating system and on the brake system. But on the other hand, China only stays on the concept, and very few people really put in practice and achieved results. In 2010, the State Key Laboratory of Automotive Simulation and Control of Jilin University exhibited a full-line control electric concept car for in-wheel motors [1].

## 2. TECHNOLOGY OF ELECTRONIC STABILITY PROGRAM CONTROLLED BY WIRE

X-by-wire comes from the aircraft control system, which converts the pilot's control commands into electrical signals and controls the aircraft flight through the controller. When the first control technology is applied to automobile technology, it is the same principle. It uses sensors to sense the driver's consciousness dynamics, and then transmits it to the controller through wires. After that, the controller can control according to the transmitted consciousness. According to the arrangement of the original technology, it can control the rotation, braking and driving of the automobile. The technology of electronic stability program is a more important part. It is mainly controlled by wire-controlled technology, and then solve the steering, braking, driving and suspension systems with the use of wire-controlled technology, so as to improve the reliability and safety of wire-controlled technology [2].

Wire-controlled steering control system. The steer-by-wire system mainly includes road-sensing simulation control, active steering control and fault-tolerant control. The linear steering system mainly cancels the mechanical connection between the steering wheel and the steering wheel, and uses electrical signals to control the steering of the wheels. It converts the original connection mode from simple mechanical control to realize many operations that can not be realized by traditional steering mode. In addition, it can also freely design the angle transmission characteristics and force transmission characteristics of the vehicle steering system.

Wire-controlled braking control system. It is different from the linear steering control system. It uses wires to replace part or all of the brake pipeline, and then controls the electrical components through the controller, so as to control the power. And it is mainly composed of brake pedal module, wheel brake actuator, and brake controller. These three parts have their own functions. The pedal sensor mainly monitors the driver's control intention to transmit it to the brake controller. The pedal force lever simulator is calculated by signals to control the wheel to the action to quickly and accurately provide the brake pressure, and the relevant pedal feeling information is provided to the driver by using the relevant information transmitted by the braking controller.

Wire-controlled driving control system. It is composed of accelerator, pedal, assembly, drive controller, drive actuator, etc. It mainly analyzes the driving information of the vehicle according to the relevant actions of the driver, so as to analyze the driving intention of the driver, and accurately control the output power of relevant power devices such as engine or motor and the driving force of wheels, and to improve the power, development economy and controlling stability of the vehicle itself.

### 3. FUTURE PROSPECTS OF TECHNOLOGY OF ELECTRONIC STABILITY PROGRAM CONTROLLED BY WIRE

The development of wire-controlled technology can indeed provide convenience for the development of vehicle science and technology in the future, but it is still difficult to match compared to the traditional automobile industry. Although wire-controlled technology can achieve great advantages in control, it has been used for a long time in the traditional automobile industry and has a wide range of contacts. In many cases, because traditional cars are implemented by using mechanical and electrical transmission tools, and the internal driving environment of the car is complex, traditional cars will be better controlled and safer than new wire-controlled cars [3]. Therefore, in order to truly apply the wire-controlled technology to the development of automobiles, it is also necessary to optimize and perfect the technology of electronic

stability program controlled by wire, so as to make the wire-controlled car as stable and safe as the traditional car and to reduce the probability of its failure, so that it can become more reliable in the process of operation.

With the development of wire-controlled car technology, the various systems of traditional cars will soon be replaced by wire-controlled systems. The development of technology of electronic stability program controlled by wire will eventually become the future development trend of vehicles, and the design of car will also usher in future major changes [4]. Based on the wire-controlled technology, the intelligent control method is used to transmit the driver's thoughts through the controller, so that the vehicle can adapt to the person from the person to the vehicle, and the safe and energy-saving driving of the vehicle can be realized to a certain extent. However, due to the imperfect development of science and technology and the pressure of energy and environment, the development of linear control technology needs to meet the direction of individualized characteristics, energy saving and environmental protection.

### 4. CONCLUSION

All in all, the development of wire-controlled technology is of great help to the future development of science and technology in automobile industry, and it also has a significant impact on improving the performance of all aspects of automobiles. However, because the wire-controlled technology is not well understood at home and abroad, and its application is not mature, it is unable to make a complete guarantee in terms of safety and stability. Therefore, we need to continuously optimize and improve the development technology of electronic stability program controlled by wire, so that the application of wire-controlled technology will become more and more extensive in future automobiles.

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# Reflection on American Autonomy and Self-reliance in the Film *The Martian*

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**Abstract:** American film industry has developed a lot in the past decades and it influences people from all over the world by its big movies which convey American core values. And the value which spreads widest in China is American autonomy and self-reliance. It is also the core value of American culture. So, the author chooses American autonomy and self-reliance as the theme of this thesis. The thesis is going to analyze American autonomy and self-reliance reflected in the film *The Martian* and tries to prove that there is a great positive power of autonomy and self-reliance in the views of Americans. So, this thesis consists of four parts. The introduction part mainly includes a brief introduction of the film *The Martian*, an identification of American autonomy and self-reliance. Part one will analyze the idea that Mark is an Autonomous and self-reliant individual. Part two will try to analyze the autonomy and self-reliance of crew members. And Part three will give a detail analysis of the behaviors of other members of NASA. Thus, by analyzing the individual's autonomy and self-reliance, the author tries to conclude the idea that there is a great power of autonomy and self-reliance in the inner mind of human beings.

**Keywords:** American individualism; the *Martian*; autonomy; self-reliance

## INTRODUCTION

### A Brief Introduction of the Film

*The Martian* presents an astronaut's lone struggle to survive on Mars after being left behind. It is a 2015 science fiction film directed by Ridley Scott and starring Matt Damon adapted from the novel of the same name by Andy Weir. The film, produced through 20th Century Fox, is a co-production of the United States and United Kingdom. It also stars Jessica Chastain, Kristen Wiig, Jeff Daniels, Michael Peña, Kate Mara, Sean Bean, Sebastian Stan, Donald Glover, Aksel Hennie, and Chiwetel Ejiofor. (Wikipedia) The film was released in the United Kingdom on September 30, 2015 and in the United States on October 2, 2015 in 2D, 3D, IMAX 3D and 4DX. It received positive reviews and grossed over \$630 million worldwide, becoming Scott's highest-grossing film to date, as well as the 10th highest-grossing film of 2015. It received several accolades, including the Golden Globe Award for Best Motion Picture – Musical or Comedy, seven

nominations at the 88th Academy Awards, including Best Picture and Best Adapted Screenplay for Goddard, and the 2016 long form Hugo Award for Best Dramatic Presentation. Damon won the Golden Globe Award for Best Actor – Motion Picture Musical or Comedy and was nominated for several awards including the Academy Award for Best Actor, the BAFTA Award for Best Actor in a Leading Role, and the Critic's Choice Award for Best Actor.

The film begins with the conversations and jokes among crews of *Hermes* and at the time when they are on their mission on Mars, a strong storm comes and nearly blows their MAV. Commander Lewis who belongs to the governmental army immediately orders to abort the mission and come back to MAV and retreat. But unfortunately, during the process, Mark Watney, a botanist, is injured by a stick and blown away by the storm. After the vain search of commander Lewis, the other crews judge at once that Mark possibly has been dead because his spacesuit has been stuck a hole and he must be lack of oxygen. So, the other crews leave him behind. (Andy Weir 1-310)

The personal power the casts show audience is awesome. And also, the power of groups is very helpful. Individual cannot independently finish the whole saving plan and groups cannot do it alone. No matter crews or NASA, they have to rely on its members and then they come to success. Different from other American fiction film, *The Martian* emphasizes on the cooperation of individuals and groups and praises the power of groups and cooperation. So, it makes the author think about American autonomy and self-reliance. So, the movie, from the eyes of the author, constructs American views of individuals from individual's autonomy and self-reliance.

### American Autonomy and Self-reliance

Autonomy is an individual's capacity for self-determination or self-governance. Beyond that, it is a much-contested concept that comes up in a number of different arenas. For example, there is a folk concept of autonomy, which usually operates as an inchoate desire for freedom in some area of one's life, and which may or may not be connected with the agent's idea of the moral good. This folk concept of autonomy blurs the distinctions that philosophers draw among personal autonomy, moral autonomy, and political autonomy.

In developmental psychology and moral, political, and bio-ethical philosophy, autonomy is the capacity to make an informed, uncoerced decision. Autonomous organizations or institutions are independent or self-governing. Autonomy can also be defined from a human resources perspective, where it denotes a (relatively high) level of discretion granted to an employee in his or her work. In such cases, autonomy is known to generally increase job satisfaction. Autonomy is a term that is also widely used in the field of medicine --- personal autonomy is greatly recognized and valued in health care.

According to Robert E Goodin in the book *A companion to Contemporary Political Philosophy*, autonomy is a second-order capacity of persons to reflect critically upon their first-order preferences, desires, wishes and so forth, and the capacity to accept or attempt to change these in light of higher-order preferences. That is to say, autonomy is to be self-governed and be uncoerced with the communities. (Robert E Goodin 443-462)

As to the concept of self-reliance, In Ralph Waldo Emerson's essay entitled "Self-Reliance", he boldly states society (and especially today's politically correct environment) has an adverse effect on a person's growth. Self-sufficiency, Emerson wrote, gives a person in society the freedom they need to discover one's true self and attain one's true independence. In his definition of self-reliance, the concept contains the need for each individual to avoid conformity and false consistency, and follow his own instincts and ideas. And he admonishes his readers to avoid debt as debt will rob people of opportunities and self-confidence. Self-reliance is the foundation of a productive, efficient and self-sustaining society. Any real examples of self-reliance can be as simple as tying your own shoes and as complicated as following your inner voice and not conforming to paths set by society or religion. Self-reliance can also be seen as getting things done for yourself without relying on others, being able to "pull your weight" by paying your bills, and taking care of yourself properly. (Ralph Waldo Emerson 1-26)

In this film, there is a fully embodiment of Mark's autonomy and self-reliance. He, as the hero of this film, makes a lot of potatoes for himself and drives his rover around the public sea Mars without the permission of other countries. And he also makes himself be contacted by NASA at first by his own knowledge. This is a reflection of his autonomy and self-reliance.

## 2.MARK: AN AUTONOMOUS AND SELF-RELIANT INDIVIDUAL

### Mark's Efforts in Making Food

In the beginning of this film, the crew members meet a strong storm and Mark, the botanist, is blown away, hit by a stick of iron and injured. All the other members of his crew think he must be dead for the lack of oxygen and they have to leave after searching

for a while considering the safety of the whole members. And luckily, Mark is not dead. When he wakes up, he finds nobody on Mars and he goes back to their base to cure himself. And after he recovers from his injury, he begins to find food in the base and he finds it is not enough to support his waiting of the next Ares coming onto Mars. Thus, he begins to think about the idea of making potatoes by the use of soil on Mars and people's feces and creating water by lighting oxygen and hydrogen. Actually, it is a very dangerous action to light hydrogen. And it is also a very difficult math to calculate the percent of oxygen and hydrogen. So, in Mark's first attempt to light them, he fails to make it and hurts himself. Fortunately, he plants potatoes successfully and it is enough for him to eat for two hundred days. During all the process, Mark cannot count on others or his groups but himself. And he also has to make every decision by himself, trust himself fully and get through all the situations that may occur. As the observation of Tocqueville, individualism disposes each members of community to draw apart with his family and friends and so that he can willingly leave society by his own. That is to say, when one leaves his groups, he can also live a better life by his own spirits, skills or knowledge. This is the power of individualism. This is also the power of self-reliance and autonomy. Although it is an instinct for Mark to seek chances for living and making food for himself, it is also an embodiment of the power of American culture under which Mark grew up. He doesn't just wait for help and do nothing. He doesn't only count on crew members or NASA and he knows how to count on himself and meanwhile to take advantage of the power of groups. He also knows the cooperation of himself and the groups behind him weighs much more important. Thus, he finally is saved by others on the premise of his instinct of struggling to live and to go back to earth. To some degree, his successful coming-back marks the progress of the whole human beings. And his efforts in making food on Mars also marks a great promotion of the whole human beings or people's possibilities to live on Mars or even to colonize Mars.

### (2) Mark's Efforts in Contacting NASA

Meanwhile, Mark's efforts in contacting NASA also reflects his American characters: autonomy and self-reliance. He tries to reach the place where the next Ares will land in the future at first. So, he drives the Rover and prepares enough food. The problem is that if he turns on the heater, it will consume half of the Rover's battery every day and if he turns off the heater, he will be frozen to death. And in order to save power during the long journey, he tries to turn off the heater but he fails to do so because it is too cold to bear. He, at last, finds the very way to solve the heating problem. He digs out the Radioisotope Thermoelectric Generator (RTG) which can heat its surroundings. But if he breaks it, there will be no

more human beings. After all the problems have been solved, he drives the Rover every day and the driving distance is longer than the former day. And occasionally, NASA finds that he is finding the pathfinder which is the communicative machine produced in 1997. Vincent, the director of Mars mission of NASA, also finds the replicate of the pathfinder to make contact with Mark. They finally communicate with each other successfully and briefly. At first, they can just use some letters and pictures to exchange ideas with each other. But under the help of NASA, they finally can communicate with each other in sentences and they just need to wait for a long time for each transmission. Although the communicating problems have been solved, there comes other problems. Mark is lack of food and there is no proper rescuing plan. It is positive that they solve one of the key problems: communication problem. During the process of Mark's seeking contact with NASA, he makes every decision by himself and there's no any instruction and help from others. He repairs the pathfinder and he tries to make himself connected by his groups. As the opinion of Emerson, self-reliance can be seen as getting things done without relying on others. And also, according to Dworkin, autonomy is self-governed. Mark gets things done without relying on others and he is self-governing despite that there is no any other choice for him. So, there is a strong embodiment of autonomy and self-reliance in this part of the film. And it also tells the audience that people should equip with the basic skills for living alone and the abilities to deal with the relationship between individuals and communities. Individuals cannot do everything by relying on the groups and in return, they cannot exist alone outside their communities. For instance, Mark records everything in video because he thinks he is not alone and once he is dead, people will find the videos and his experiences on this red planet in the future. He thinks, in his deep mind or subconsciousness, that there must be someone watching him. Maybe, it is God watching him or someone else. So, people should trust both themselves and their groups whatever problems they meet. They should hold the idea that human beings are living in a people's society instead of their own. People deal with every relationship in every situation from the times when they are born in this people's world.

### 3. CREW MEMBERS: AUTONOMOUS INDIVIDUALS

After Mark's getting contact with NASA and NASA's plan to save Mark, the scene comes to the life of other crew members on Hermes. And at the time, they are facing their own choices. The choices may let them stay longer in the space or they may face up with death. There are five crew members except Mark. They are commander Lewis, Martines, Johansen, Beck and Vogel. Their behaviors embody Americans' spirit of autonomy and they disobey

NASA's order and just do what they want to do and just do things by their own instinct. Each of them is autonomous individual. As Robert E Goodin says in the book *A companion to Contemporary Political Philosophy*, autonomy is a second-order capacity of persons to reflect critically upon their first-order preferences, desires, wishes and so forth, and the capacity to accept or attempt to change these in light of higher-order preferences. So, they do what autonomous individuals do. (Robert E Goodin 444)

Firstly, commander Lewis is an autonomous individual. She is the director of the whole crew members of this mission and at the same time, she belongs to the military of American government. On the one hand, she firmly gives the order of aborting the mission when they come up with a strong storm and the MAV has possibility to get down on the ground. And also, when Mark has been blown away and hurt by an iron stick, she also orders her members to launch. Her instinct is to protect everybody of her team. She orders everyone by her instinct. On the other hand, she disobeys the order of NASA and leads her team members to execute the rescue plan which has been rejected by NASA. And furthermore, she turns off the communicative equipment which is used to contact with NASA when she has to order Beck to make a bomb to blow up one of the cabins, which will give more pressure to the ship so that they can get more closer with Mark and grasp him more possibly. Thus, she ignores the opposition of her leader, which means that she resists the authority. That is to say, she tries to change the high-order preferences. Such kind of behaviors are called autonomy. And she does herself successfully and changes the order of NASA. She becomes an autonomous individual and is self-governed.

Secondly, Johansen is an autonomous individual. She is responsible for the maneuver of the Hermes and computer problems and she is a chemist. And when the crew members decide to save their boy Mark, she votes yes by her own instinct and she disobeys the order of NASA. She maneuvers the ship to force NASA to agree their ideas and meanwhile to cooperate with them. And thirdly, Martines is also an autonomous individual. He is responsible for the maneuver of the ship. He also votes yes when commander Lewis asks him whether to execute the rescue plan. That is to say, he chooses to disobey the instruction of NASA and just wants to save one of his friends or buddies. He also follows his heart. And finally, Beck and Vogel are also autonomous individuals. Beck is a biologist and Vogel is a chemist. They also choose to execute the rescue plan which has been rejected by NASA and they are willing to spend another 533 more days in space. They are also willing to risk their life because there are many unknown things that people cannot predict in space. They would like to do what a group should do to their member Mark. Actually, during the whole process, all

the crew members should consider the relationship between himself or herself and the whole group. As an individual, he or she can be an autonomous person. However, as one of the crew members, he or she has to think about the common good. They have to calculate so carefully that they can say they can do it with a hundred percent.

All in all, all the crew members are autonomous individuals because they all tend to change the high-order preference and resist the authority. They can do things by their own instinct and be responsible for any result. They can be self-governed without the instruction of NASA. But at the same time, they deal with their relationship with NASA very well. They finish the mission and have a harmonious relationship with their leader. And in the end, the people from all over the world cheer the victory. It is the victory and progress of the whole human beings. Thus, this film pushes audience to think about the future world and makes people be full of hope towards the society.

#### OTHER MEMBERS OF NASA: AUTONOMOUS INDIVIDUALS

Dr. Vincent Kapoor, the head of NASA's Mars missions, wants to bring Mark home out of a sense of honor and obligation. All of the other characters—including Melissa Lewis, Daniels' Teddy Sanders, and Teddy's morally indignant right-hand man, Mitch Henderson—are basically on the same page. It's not a question of whether everyone wants to do the crowd-pleasing and heroic thing, but whether it's possible. It takes a while just to get a radio message to Mars and back, and you can't just send a spacecraft there like you'd overnight-mail a birthday gift. The mission has to be prepared for, and paid for. That can take months or years. At one point the NASA people discuss whether to skip safety inspections on an unmanned flight in order to make a particular calendar window.

The NASA technicians, scientists and managers race against the clock, working through equations on wiper boards and worrying about money and fuel and safety issues, but for the most part they talk to each other without hysteria. They say impulsive things, and then have to apologize. They crack jokes. Some of the exchanges verge on workplace comedy. Much of Scott's reputation rests on his ability to conceive and execute elegant images, often in service of grim stories, so it's easy to forget how good he is at camaraderie and banter.

The characterizations start out feeling a bit vague and flat, but deepen through the accumulation of little details. Even supporting players who show up for a scene or two have a life force, such as Donald Glover's Rich Purnell, a brilliant but eccentric young scientist who lives so deep inside his own head that he doesn't know the NASA director's name.

#### CONCLUSION

In conclusion, everyone who works in NASA has his or her own ideas or principles and meanwhile they

put forward their ideas hoping they can be helpful for this time's Mars mission. They just work as individuals of the NASA group and do what they should do within this group. And meanwhile, they deal with the relationship between individuals and groups very well, which makes them have a harmonious official relationship and become autonomous individuals.

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# Explore the Feasibility of Introducing Blockchain into Digital Signatures from the Viewpoints of Laws and Regulations

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**Abstract:** It is accustomed to using seals in official occasions or when signing official documents to express its fairness and formality. However, in view of the use of the Internet, many existing documents, messages, contracts, and certifications are gradually being presented in electronic form, and sometimes even completely replaced by electronic forms. Therefore, the legal effect of digital signatures is very important. Digital signatures have the advantages of high efficiency, environmental protection, safety, and reliability. Whether in the use of e-commerce or e-government, the use of digital signatures cannot be ignored. Although digital signatures are highly accepted, but most people have very little knowledge of own country's digital signature law. Legal research on digital signature law is also quite rare. On the other hand, blockchain is quite popular recently. One of the underlying technologies used by blockchain, asymmetric encryption, is actually found in digital signatures recognized by digital signature law. If we want to find a legal position or definition for the technology used in the blockchain in current law, digital signatures will be an extremely suitable development basis, so the importance of studying the electronic signature law will once again appear.

**Keyword:** Blockchain; Digital Signatures; Viewpoints of Laws and Regulations

## 1. INTRODUCTION

Digital signatures are critical for information security. As technology advances, more and more people favor electronic over paper records. However, personal signatures on electronic records are vulnerable to tampering. Trade secrets or classified governmental information may be spied on or even stolen. Therefore, to ensure the security and incorruptibility of electronic records, digital signatures were invented [1-2].

Digital signatures are a kind of electronic signature. Based on public key infrastructure technology, digital signatures employ an asymmetric cryptosystem and hash functions. Currently, digital signatures are considered a more secure type of electronic signature as well as the most mature electronic signature technology. Digital signatures are an effective method for solving the security issues of electronic

records [3].

Digital signatures are different from electronic signatures. Electronic signatures are attached to and associated with an electronic record and serve the purpose of confirming the identity and authorization of the signatory as well as authenticating the record [4]. Furthermore, digital signatures are produced by turning electronic records into digital data of a specific length through mathematic or other means of computation. The signatory's private key is then used to encrypt the data to form electronic signatures that can be verified by a public key [5].

"Electronic records" broadly refers to records comprising any text, sounds, pictures, or images generated by electronic or other means unrecognizable directly by human perception while being capable of conveying their intended meaning exclusively via digital processing [6].

The security and confidentiality of a digital signature is predetermined by the design of each algorithm. The design of algorithms must be based on cryptographic algorithms with the difference that irreversibility does not need to be taken into consideration. The encryption of the algorithm is equally fundamental, where encryption is the scrambling of an electronic document into a cipher text using mathematic algorithms or other methods [7].

## 2. THE BACKGROUND AND PURPOSE OF DIGITAL SIGNATURE LAW

In response to the expanding application of digital signatures and changes in trading behaviors, countries around the world have started to draw up strict laws related to digital signatures. These laws are established to prevent serious loopholes in transactions and avoid lawsuits concerning the legal validity of document signatures to protect individual's rights [8-9].

### 2.1 The Background of Digital Signature Law

First, the general need for and dependency on the internet is extremely high and people use it to exchange information or conduct virtual transactions. However, message transmission is threatened by information security risks, such as being intercepted, spied on, or tampered with by other people online [10].

Second, in the face of today's extremely complex digital transaction environment. In particular, online transactions differ starkly from offline transactions because offline face-to-face transactions allow both parties to confirm each other's true identities. Moreover, in offline transactions, any problems related to the transaction can be resolved immediately onsite to prevent subsequent disputes or information leakage [11].

## 2.2 The Purpose of Digital Signature Law

In 2001, Taiwan promulgated the implementation of the Electronic Signatures Act, which serves as the legal source and regulations for digital signatures. Additionally, citizen digital certificates and certificates issued by the Ministry of Economic Affairs Certificate Authority of the Republic of China are issued accordingly. To a certain degree, the Electronic Signatures Act helped to establish a secure and trustworthy online environment. The verification of the true identities of both parties prevents either party from later denying the transaction [12].

The electronic certification technology used in digital signatures is a modern-day technological invention. This technology can be used to solve problems related to transactions that are not conducted in person, which improves the sense of reliability regarding the internet for consumers. Moreover, the technology simplifies transaction procedures and reduces transaction time. In this way, users can truly be confident in the technology, thus promoting the legal validity of digital signatures [13].

## 3. THE LEGALITY OF DIGITAL SIGNATURES IN DIFFERENT COUNTRIES

### 3.1 Taiwan

In Taiwan, the Science and Technology Law Institute of the Institute for Information Industry started research on digital signatures under the commission of the Ministry of Economic Affairs in 1997. The institute then suggested that the government draw up the Electronic Signatures Act, implement the development of national information infrastructure, establish the legal status of electronic signatures and records, and produce a management system for certificate authorities to resolve the insufficient or uncertain parts of current law. The law was established on the basis of the following principles [14]:

Principle of technology neutrality: Any technology that ensures data integrity during transmission or storage processes and is capable of authenticating user identities can be used to make electronic signatures. That is, digital signatures based on asymmetric encryption are not deemed exclusive, so as not to hinder the application and development of other technologies. This law adopts the electronic signature as its legislative basis as advocated by numerous international organizations including the United Nations and the European Union (EU) instead of the digital signature in order to respond to future

electronic authentication innovations such as biotechnology [15]. This law is applicable for any electronic signatures and records made with any electronic technologies, as long as its functions are equivalent to a record, a signature, or a stamp on paper.

Principle of free contract: In terms of private electronic transactions, both parties shall agree on the electronic signatures and records that they both trust and are willing to follow on the basis of the principle of free contract. Said electronic signatures and records must be made with adequate security technology, procedure, and methods, and the agreement will be used as the basis for subsequent legal liabilities [16]. The government shall not interfere this contract with its authority. Both parties of a transaction may agree on using particular electronic signatures or records using a specific technology. In addition, certificate authorities and users may use a contract to establish their rights and obligations.

Principle of market orientation: The government's regulation of certificate authorities and the development of an electronic certification market should be minimal. From now on, the establishment of any electronic certification mechanism and the development of an electronic certification market, that is, the development of all electronic certification services and relevant standards necessary for electronic transactions, shall be led by the private sector [17].

### 3.2 China

In China (excluding Hong Kong, Macau, and Taiwan), the primary law concerning electronic signatures is the Electronic Signature Law of the People's Republic of China, which was promulgated in 2004. Since then, the use of electronic signatures in China has increased, particularly in online businesses [18]. Recently, the government of China started implementing e-government services, which adds the option of using electronic signatures for the public when dealing with the government.

According to the Electronic Signature Law, reliable electronic signatures are legally equivalent to handwritten signatures or stamps. The law allows all personnel involved in a transaction to agree on the type of electronic signature used in the transaction according to their own perception of reliability. If no agreements have been drawn, electronic signatures that meet the following conditions are considered reliable [19]:

1. Data used to create electronic signatures are owned only by the creator to manage their signatures.
2. Data used to create electronic signatures are controlled only by the creator when the signature is created.
3. Once signed, all modifications made to the electronic signature are recognizable.
4. Once signed, all modifications made to the content or format of the data used to create the electronic signature will be visible.

In China, the storage and processing of electronic signatures may be under the restriction of the Cybersecurity Law of the People's Republic of China. Additionally, Chinese authorities often reference the Guide of Personal Information Protection on the Internet, which states that all personal information collected and generated within Chinese borders must be stored in China. According to China's Electronic Signature Law, electronic signatures are inadmissible under the following circumstances [20]: 1. Documents or agreements concerning interpersonal relationships, such as marriage, adoption, or inheritance. 2. Documents or agreements regarding public utilities, such as the termination of water, heat, or gas supplies. 3. Other circumstances where electronic records are inapplicable according to laws or regulations. In terms of documents or agreements used in private sectors, the parties involved may agree or disagree on the use of electronic signatures.

### 3.3 The United States

In 2000, the United States (US) promulgated the United States Electronic Signatures in Global and National Commerce (ESIGN) Act and granted electronic signatures the same legal status as handwritten signatures throughout the entire US. Consequently, organizations were able to simplify and speed up their processes of collecting, tracking, and managing signatures and approvals for various agreements and documents [21].

The ESIGN Act provides that any law requiring signatures can be satisfied via electronic signatures, allows electronically executed agreements to serve as evidence in court, and prevents an electronic signature from being denied legal effect, validity, or enforceability solely because its electronic form. In order for an electronic signature to be legally binding under the ESIGN Act, all electronic signature workflows are recommended to contain the following parts: intended signature, agreement to electronically implement business, opt-out clauses, a copy of the signature, and record retention [22].

In 1999, the Uniform Law Commission drafted the Uniform Electronic Transactions Act (UETA) to provide a legal frame for electronic signatures in each state. The UETA has been adopted by 48 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. However, the states of Illinois and New York did not adopt the UETA; instead, they promulgated their own regulations regarding electronic signatures. In some parts, these regulations made substantial changes to the language and guidelines recommended by the UETA, such as detailed information concerning consumer disclosure and regulations concerning certification authorities. The UETA outlined the following principles [23]: 1. A record or signature cannot be denied its legal effect or enforceability solely because of its electronic form. 2. A contract cannot be denied its legal effect or enforceability solely because electronic records were

used in its composition. 3. If the law requires records in a written form, electronic records can suffice (Fry, 2000).

If the law requires a signature, an electronic signature suffices. In all of the states that adopted the UETA, the law is usually not applied to certificates of birth, marriage, or death; wills and testamentary trusts are not eligible, either.

After almost 20 years since the promulgation of the UETA in the US, states including Arizona, Nevada, and Tennessee have amended their respective UETAs in response to newly emerged and adopted technologies, particularly blockchain. For example, the state of Arizona amended the Arizona Electronic Transactions Act (AETA) Section 44-7061 to ensure that electronic signatures and smart contract clauses secured through blockchain technology are considered electronic records. The AETA defined blockchain distributed ledger technology countries and indicated that decentralized distributed ledger technology is protected by passwords [24]. Essentially, the Arizona amendment recognizes the following ideas: Signatures secured through blockchain technology are regarded as electronic signatures; contracts secured via blockchain technology which secures records or contracts and are recorded in electronic form are considered legally effective and enforceable smart contracts [25].

### 3.4 Summary and Comparison of Laws and Regulations of Each Country

In terms of the legislative construct, legislation concerning electronic signatures in these countries can be divided into e-commerce standard acts focusing on electronic signatures and electronic signature acts. An e-commerce standard act focusing on electronic signatures means that while focusing mainly on electronic signatures, said act is more extensive and covers numerous basic issues in e-commerce, such as the responsibilities of an e-commerce operator, regulations on online information services, and coordination of international e-commerce. In other words, such acts can be considered e-commerce laws in a broader sense. Examples of such laws include early e-commerce legislation and e-commerce model laws of some international organizations, specifically, the ESIGN Act in the US, The Model Law on Electronic Signatures of the UNCITL. The other category, electronic signature laws (including electronic certification), is more focused on regulating the legal effects of electronic signatures, electronic certifications, electronic records, and electronic contracts to ensure the legal status of the fundamentals of e-commerce transactions. For example, China's Electronic Signature Law of the People's Republic of China and Taiwan's Electronic Signatures Act are more concentrated on details on the implementation of electronic signatures. The core objective of both categories is to ensure the legal

effect of electronic signatures, electronic contracts, electronic records, and electronic certifications. [26].

#### 4. THE EXTENDED CONTENT OF FUTURE DIGITAL SIGNATURE LAWS: THE TRAJECTORY OF TAIWAN'S ELECTRONIC SIGNATURES ACT

This study chose the Electronic Signatures Act that has been implemented in Taiwan as the subject and investigated the shortcomings and loopholes of the act. Moreover, effective suggestions for the development of digital signature regulations were proposed based on the literature review to further improve the regulations.

The reasons why this study focuses on the Electronic Signatures Act of Taiwan as a case study are as follows: 1. The Electronic Signatures Act of Taiwan was established later than other countries including the US and those in Europe and still has much room for improvement. 2. Experts in blockchain technology are needed in Taiwan to promote digital signatures or products integrating electronic signatures and blockchain technology to drastically improve the experience and confidence of users.

The objective of this study was to identify necessary improvements for Taiwan's Electronic Signatures Act. Through the literature review, this study concluded that the following three parts of the Electronic Signatures Act need to be improved: 1. Article 6 in the Electronic Signatures Act, regarding certificate authorities. 2. Article 7 in the Electronic Signatures Act, regarding transaction security and identity authentication. 3. Combination of current electronic signatures or digital signatures with blockchain technology to improve the identity authentication of both parties involved in a transaction and reinforce data incorruptibility.

In asymmetric encryption, the main role of a certificate authority is to verify the relationship between an electronic signature made by a private key and a public key and thereby authenticate the identity of the creator of the electronic signature. A certificate authority also provides relevant certification services, including reviewing the identity, eligibility, and type of an applicant, issuing private keys to applicants, and issuing public key certificates to verify the relationship between a public key and a private key to authenticate the identity and ensure security [27].

Currently, Article 11 of the Electronic Signatures Act stipulates that a certificate authority must produce and publish a certification practice statement. In addition, the measures a certificate authority must take before terminating their services and the liabilities of a certificate authority for damages caused by their operation or other certificate-related processes are also regulated by said article. The Electronic Signatures Act adopts the principle of low-level management in terms of managing certificate authorities. The idea is to allow private sectors to take

the lead in developing relevant electronic certification services and necessary standards for a variety of electronic transactions [28]. In addition, said principles allow the market to operate freely and operators can negotiate and compete.

Considering the enormous market of internet applications and its rapid development in the future, numerous operators have invested in setting up companies or new departments to strive for this market with extensive potential. Once blockchain technology is integrated with electronic signatures or digital signatures, the government is recommended to adopt a high-level management principle in law. Although confidential data are incorruptible once secured by blockchain technology, the supervision of a third-party certification authority is still necessary, especially an official certification authority [29]. The purpose of these measures is to protect the users of electronic signatures or digital signatures and further improve related laws and regulations.

Although the technology of electronic signatures can authenticate the identity of the sender and the receiver, the following issues still exist: 1. The signatory's identity may be impersonated, but the receiver is unaware. 2. The signatory may think that the receiver has received and read the transmitted data, but the data was not received by the intended receiver.

To solve the aforementioned issues, further amendments or changes to such laws are suggested to look into real-name systems for both senders and receivers. Laws should introduce Know Your Customer (KYC) certification, which is a real-name system that financial institutes, banks, and exchanges must adopt [30]. In the future, the Electronic Signature Act is recommended to include KYC certification, which is similar to a record of personal information including legal name, telephone number, and ID number. Such certification systems are extremely important because electronic signatures without a real-name system and those not subject to government monitoring and legal regulations will increase the possibilities of illegal acts in transactions.

#### 5. SUGGESTIONS FOR REGULATIONS INTEGRATING BLOCKCHAIN TECHNOLOGY

As industries in different countries have grown familiar with the application of blockchain technology, a consensus has been reached that the application of blockchain technology should not be enforced in all fields just for the purpose of applying the technology. However, an understanding of the main properties of blockchain technology is necessary to avoid committing this mistake. Blockchain technology is a data processing method and its three main properties are as follows [31]:

1. Because of the characteristics of the data structure, once a consensus has been reached, the block generated is incorruptible and is useful for tracking the source.
2. Blocks are generated via a consensus

mechanism and a variety of algorithms and authentication of mass collaboration is necessary.<sup>3</sup> The blockchain framework is decentralized and the termination of service from a single node will not affect the overall process.

According to the definition in Article 2 of the Electronic Signatures Act, signatures are divided into electronic signatures and digital signatures. Electronic signatures refer to symbols that can be used to verify and confirm the identity and authority of the signatory and authenticate electronic records, such as a signature in electronic form or even biometrics such as a fingerprint or the iris. Digital signatures not only have to adopt asymmetric encryption but also a mechanism of certificate authority and certificate practice standards. Digital signatures have higher credibility in law. These differences are acknowledged in Article 10 of the Electronic Signatures Act: The authentication of a digital signature and the identity of its signatory depend on a public key issued by a credible certificate authority. Certificate authorities established on the basis of this act cannot provide services to the public unless its security and professional abilities meet the security standards demanded by this act. The reliability of certificates issued by such authorities must be trustworthy for the public. In addition, digital signatures must be based on public keys issued by a certificate authority and are only effective after being authenticated by a specific procedure.

To solve the problem that electronic signatures can only be used to authenticate the identity of both parties and are incapable of verifying the authenticity of an electronic record, electronic signatures may be integrated with blockchain technology. With the employment of the data structure design (the first blockchain technology property) and the consensus mechanism (the second blockchain technology property), the content of an electronic record is incorruptible [32]. In addition, through authentication of mass collaboration that is similar to cross-checking and the availability of relevant transaction data for inquiries, not only can the identity of the sender and receiver and the authenticity of the record be verified, but the substantial content of a record, such as the recorder, timestamp, and histories, can also be assured. In this manner, the reliability of blockchain applications is improved.

## 6. CONCLUSION

Since the emergence of blockchain technology, its application has expanded beyond crypto currencies. Because of its decentralized structure (the third blockchain technology property) and the characteristic of being traceable and incorruptible (the first blockchain technology property), its application has broadened to fulfill the requirements of electronic signatures and information openness [33].

First, in the future, if a user can prove that their electronic signature or digital signature is integrated with blockchain technology, this proof should be a crucial component of laws and regulations. The government should even consider recognizing the legality of blockchain signatures in Taiwan or recognizing individual blockchain signatures. Meanwhile, the government should add articles related to blockchain signatures to the Electronic Signatures Act.

Second, for the smooth development of blockchain signatures in the future, users and blockchain companies should sign paper contracts to prove that users have adopted blockchain technology signatures.

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# On Influence of Affective Factors on Construction of Self-identity in the Social Discourse

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**Abstract:** The three important analysis objects in critical discourse analysis are the identity, difference and rights in the social discourse. Traditional research on the issue of identity in the discourse is generally based on the premise that discourse reflects self-identity. From the opposite point of view, this paper analyzes the influence of affective factors on the construction of self-identity in the discourse based on the premise that discourse constructs self-identity.

**Keywords:** Affective factors; Construction of self-identity in the discourse; Influence

## INTRODUCTION

Self is a kind of psychological construction. In behavior and social sciences, it is regarded as a construction that plays an organizational function, that is, people's thoughts and behaviors are organized by the "self". The construction of self-identity in the discourse is to reflect one's own thoughts and behaviors in the context of the premise of the discourse. It is recognized by many people that emotions have a certain influence on the construction of self-identity in the discourse. Therefore, it is necessary to expand the influence of affective factors on the construction of self-identity in the discourse to bring certain reference and opinions.

### 1. CONSTRUCTION OF SELF-IDENTITY IN THE SOCIAL DISCOURSE

When communicating with people, we consciously or unconsciously disclose our identity to the objects of our communication through discourse. The traditional view is that discourse is the embodiment of self-identity. However, such view ignores one of the most remarkable characteristics of human beings, that is, human beings have self initiative. People can adjust their own initiative according to the conditions of the objective world to transform the objective world. The reflection of this characteristic in the discourse is that people can construct self-identity. Post structuralism and post-modernism believe that human identity is not obtained from the early stage of human life and has been fixed since then, but is constantly constructed and reconstructed when communicating with others and the world, which has been changing all the time. And human identity is multiple. While the traditional view that people's

behavior naturally reflects some of people's internal essence, namely people do something because they have a certain identity. The theories hold by post structuralism and post-modernism suggest that the fact is contrary to the traditional view. People construct themselves as people who do these things when they reflect their identity. For example, female wear skirts. They wear skirts not because they are female, but because it reflects their female characteristics and make themselves "women". In the 1980s and 1990s, feminist theorists often talked about "doing gender" or "performing gender". They regard gender as an act or thing. They believe that gender is an externalized attribute, and it is possessed by the behavior with gender meaning stipulated by all members of a social group instead of by the human. Therefore, "being a man or woman" means engaging in gender meaningful behaviors and making them part of the self that individuals embody to others. Only in this way can these behaviors be internalized into "self", and the gender of self becomes a natural behavior when communicating with others, which is unlike the performance of actors.

### 2. THE INFLUENCE OF AFFECTIVE FACTORS ON THE CONSTRUCTION OF DISCOURSE

#### 2.1 The influence of "self" on the construction of discourse

Since the 1970s, a unified construction in psychology and other social behavioral sciences has been "self". Conservatively, it can be understood that the emotional and motivational system is closely related to the self, but the system is not an internal part of the self. For example, people's emotions and motivation may be affected when they compare themselves with their own standards or past selves; regurgitate their own failures, shortcomings, and moral faults; think about how others perceive them; think about their goals and how to achieve the goals; or evaluate how well they perform certain tasks. Under the influence of the emotional factor of "self", various issues have appeared widely, such as self-awareness, self-esteem, self-control, self-identity, self-verification, self-affirmation, self-awareness emotion, self-difference, self-evaluation, self-monitoring, etc. Some researchers have pointed out that the self is not a single subject at all, but a collection of loosely related sub-themes. Although many behaviors occur

automatically and unconsciously, many complex human behaviors involve a certain degree of self-reflection [1]. In fact, reflexive consciousness, that is, taking oneself as an object to form views and concepts about oneself. It may be the most important psychological feature of human beings. It distinguishes humans from animals, the vast majority of animals. Under the influence of the emotional factor of "self", when people construct self-identity in the social discourse, they tend to point out the evil of egoism, pride and selfishness, and think about how to get rid of egocentrism.

### 2.2 The influence of "maintaining self-esteem on the construction of discourse

In the second half of the 20th century, the convergence of three developments created by academic psychologists and sociologists increased the focus on self. The first one is the empirical interest in the concerted effort that emerged from the 1950s to the 1960s under the influence of self-esteem emotions. These authors not only proved the importance of self-esteem as a mental structure and psychological emotions, but also provided methods of self-report, which inspired a lot of research. This early research on the predictors of trait self-esteem and the accompanying things subsequently sparked interest in, that is, how do people maintain self-esteem in the face of various identity threats? Therefore, since the 1960s, when the social emotion and psychology of "maintaining self-esteem" was generated, the theoretical community began to explain various phenomena with the use of self-esteem motivation, including conformity, self-service attribution, response to self-related feedback, attitude changes, pro-social behaviors and group behaviors. Therefore, in the construction of self-identity in the discourse, the appearance of "self-esteem" greatly influences people's behavior and conversation in the world.

### 2.3 The influence of "cognition and regulation" on the construction of discourse

"Self" provides a certain mental basis for people's reflexive thinking ability. Simply speaking, with the deepening of research and the continuous progress of

the society, most of the psychological phenomena of "self" research involve the two basic psychological processes of "cognition and regulation". Focusing on oneself often leads to self-related cognition and allows the possibility of regulation [2]. The psychological mechanism and emotion such as cognitive process urge people to consciously think about their own things. Such ability to process information about themselves lays a foundation for the construction of self-concept and identity. Self-related cognition not only guides people's behavior and affects their emotions, but also provides the connection between the social world and individuals. By regulating the process, people can decide to control how they think, feel and act, and then set the way they do things. Of course, people have achieved some success in self-control. At least, having a "self" makes it possible for people to occasionally get rid of the influence of environment, history and internal state. People should act in an independent and self-directed way, and constantly construct of self-identity in the discourse during this process.

### 3. CONCLUSION

To sum up, in each case, reflexive consciousness and self-generated emotion will stimulate and guide people's behavior, so affective factors are undoubtedly important to the construction of self-identity in the social discourse. People's thoughts (involving self activities) affect their emotions and motivation, just like their thoughts on many things in the world can affect their feelings and desires at any specific time, thus affecting the expression of discourse and self-identity.

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# The Influence of Information Management on Enterprise Strategic Management

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**Abstract:** with the continuous progress of information technology and the rapid change of market information, many enterprises have adopted ERP system to manage enterprise logistics, capital flow and information flow; On the other hand, the intensification of market competition makes enterprises adopt strategic management to obtain information leading advantage, so as to improve their comprehensive competitiveness and competitive advantage. Therefore, the cooperation between ERP and strategic management is the inevitable trend of enterprise management. However, it is worth paying attention to the relationship between them and the driving force of ERP management on strategic management.

**Keywords:** Influence, Information Management, Enterprise Strategic Management

## 1. INFORMATION MANAGEMENT

Enterprise resource planning or enterprise resource planning (ERP) was proposed by Gartner Group Inc. ERP is an enterprise resource management system integrating enterprise management concept, business process, basic data, human and material resources, computer hardware and software. ERP is an advanced enterprise management mode and a solution to improve the economic benefits of enterprises. Its main purpose is to comprehensively balance and optimize the management of human, financial, material, information, time and space and other comprehensive resources owned by the enterprise, coordinate all management departments of the enterprise, carry out business activities around the market orientation, improve the core competitiveness of the enterprise, so as to obtain the best economic benefits. Therefore, ERP is not only a software, but also a management tool. It is the integration of IT technology and management ideas, that is, advanced management ideas use computers to achieve the management objectives of enterprises.

## 2. SUPPORT OF ERP INFORMATION MANAGEMENT TO ENTERPRISE STRATEGIC MANAGEMENT

Strategic management is a dynamic management process of making decisions and implementing these decisions on the future development direction of an enterprise. The comprehensive strategic management process includes three stages: Strategic Analysis and formulation, strategic implementation, strategic

evaluation and control. In these three stages, ERP can provide strong support to senior managers.

### 2.1 strategic analysis and formulation stage

Strategic analysis refers to the analysis and evaluation of the enterprise's strategic environment, and the prediction of the future development trend of these environments, as well as the possible impact and impact direction of these trends on the enterprise. Generally speaking, strategic analysis includes the analysis of the enterprise's external environment and the analysis of the enterprise's internal conditions.

Due to the incompleteness and deviation of information sources and the interaction between various factors, qualitative analysis technology is generally used for industrial competition analysis, ERP provides the raw data and basic data required in the process of qualitative analysis, such as: the target cost reflects the information whether the cost of leading products can be reduced; The length of the industrial chain in the industry reflects whether the participants must enter jointly; The advertising investment in sales cost reflects the size of product difference advantage; The model of sales channel reflects the difficulty of entrants to open the market and so on. ERP can provide quantitative analysis techniques for these contents, such as: the financial analysis module evaluates the enterprise's performance and forecasts the future trend according to the balance sheet, income statement and cash flow statement; The customer service management module reflects the customer's evaluation of the enterprise's products; Sales analysis reflects the market share of the enterprise; The analysis of product market competitiveness reflects the situation of marketing ability; The human resource management module provides information on the number and quality of managers[1].

### 2.2 strategy implementation stage

After an enterprise's strategic plan is determined, the focus of strategic management activities is transferred from the strategic analysis and formulation stage to the strategic implementation stage. The strategic implementation stage is the implementation of the strategic plan to achieve the strategic objectives, which is the process of putting the strategy into practical action. Generally speaking, the implementation of a strategy can be promoted in three aspects: one is to formulate functional strategies, such as marketing strategy, quality control strategy,

cost control strategy, financial strategy and so on. In these functional strategies, we should be able to reflect the strategy promotion steps, projects and general time arrangement; The second is to design the organizational structure of the enterprise, so that the structure can adapt to the adopted strategy and provide a favorable environment for the implementation of the strategy; The third is to match the leader's quality and ability with the implemented strategy, that is, select the appropriate senior managers to implement the established strategic plan. When implementing the marketing strategy, the enterprise needs to understand the market demand and the sales change trend of the enterprise's product market, that is, to make sales forecast; Master the dynamics of competitors; Obtain customer needs, satisfaction and loyalty; Establish a perfect marketing system. The support of ERP for these work is as follows: predict the change trend of product market through various mathematical models such as regression analysis and time series analysis; Master the long-term objectives of competitors through competitor file management; Obtain the actual needs of customers through customer relationship management; Win customer satisfaction through remote query of sales orders; Enhance customer loyalty through credit limit management; The strict management and control of the marketing system is realized through the distribution management module[2].

When implementing cost control strategy, enterprises need to understand the dynamic process of cost formation; Master the actual situation of current cost; Analyze the composition of cost; Analyze the causes of cost changes. The support of ERP for these works is reflected in: cost calculation methods for different production characteristics (such as batch cost calculation method in discrete industry and step-by-step cost calculation method in process industry).

When implementing financial strategies, enterprises need to determine the amount and characteristics of funds required for business activities; Determine the way to obtain funds; In determining the feasibility of various strategic programmes; Provide financial data to senior managers. ERP's support for these work is reflected in: flexible budget based on a series of production levels; Calculation of time value of money and capital cost for various investment schemes; Various evaluation methods for long-term investment schemes. Marginal analysis for the optimal production scale of enterprises; Difference analysis, contribution margin analysis and cost volume profit analysis for various short-term business problems.

### 2.3 strategic evaluation and control stage

In the process of strategy concretization and implementation, in order to ensure the consistency of organizational behavior and enterprise strategy, the high-end process and performance index system

based on strategic objectives and strategic direction must be implemented to the behavior level of the organization and its members. Therefore, the implementation of the strategy should be controlled and evaluated, That is to say, if there is a significant deviation between the actual results returned through information feedback and the predetermined strategic objectives, effective measures should be taken to correct them. When the deviation is caused by poor analysis, wrong judgment or unexpected changes in the environment, it may even re-examine the environment and formulate a new strategic plan, Carry out a new round of strategic management process.

With the development and application of ERP, the business and information space of enterprises have been greatly expanded. With the help of the platform and means provided by information technology, the "collaborative design", "collaborative manufacturing" and "customer relationship management" can be realized. The powerful amount of information and fast way of information exchange provided by ERP will bring a series of innovations in enterprise management.

### 3. INFORMATIZATION CONSTRUCTION IS THE INNOVATION OF ENTERPRISE STRATEGIC MANAGEMENT

#### 3.1 the integrated application platform straightens out the enterprise's management system

The traditional enterprise management adopts a multi-level and multi-level bloated management structure. Due to the strict hierarchy and difficult communication among all levels, it is often difficult to quickly reflect the information to the top level. The management platform provided by ERP system is an integrated management platform. It will carry out an all-round and three-dimensional combination of the enterprise's management organization to break through the limitations of traditional organization and management. The enterprise's organization is no longer "multi-level management", Instead, it presents a "flattening" trend. Information integration requires standardized management. The implementation of ERP will inevitably promote the standardization and transparency of the whole enterprise management[3]. The original unreasonable or even gray operations of some departments will be rejected, blocking the loopholes in enterprise management, and truly "making factory affairs public". At the same time, information integration strengthens the coordination and communication of various departments and speeds up the transmission of information. The information flowing in the system can be quickly reflected on the computer desktop of the decision-making level and each manager.

#### 3.2 interactive management to maximize resource optimization

Under the ERP environment, through the management platform based on information

technology, the interactive man agency between enterprises and their economic resource alliance can be realized. It realizes the best combination and scheduling of its resources through fast and effective information tools and management platform, transparent, collaborative and interactive management strategies and means. Guided by the market and customer demand, it aims to improve competitiveness, market share, customer satisfaction, obtain maximum profit and sustainable development, takes collaborative commerce, collaborative competition and win-win principles as the business operation mode, and uses modern enterprise management technology, information technology and integration technology to achieve the control of information flow, logistics, capital flow Effective planning and control of business flow and value flow, so as to connect customers.

3.3 the advanced management process improves the accuracy of controlling various business activities of the enterprise

The so-called fine management is to refine the enterprise management strength to every node of the enterprise management process[4]. Fine management emphasizes quantification and accuracy. The management perspective is broadened to order, variety, delivery date, personalized demand, quality, cost, performance and other aspects, so as to realize the management according to order, variety, delivery date and customer personalized demand. In this context, rigor has become a habitual behavior. Managers must have a full understanding of factors such as cost, material sources and growth trend to support their judgment. Emphasize the importance and accuracy of all kinds of data, and take the quantification of management and improving the accuracy of management as the goal of enterprise management[5]. Through the standardization of the workflow, the data in the workflow is completely and timely reflected in the system in two forms of quantity and value. In the system, various information required for management is continuously collected, transmitted, summarized, compared and fed back between different departments with the progress of the business process. Every link, work and business in the production, supply and marketing of the enterprise can be standardized in the system. The synchronous generation of logistics, information

flow and capital flow enables each management department to timely and effectively obtain and control various expenses and costs in business activities, so as to truly achieve pre prediction and in-process control. Fine management is no longer a slogan, but a reality of the enterprise.

#### 4.CONCLUSION

As a system, enterprise strategy is the action program of its activities. The enterprise strategy points out the production situation, medium and long-term development objectives and development direction of the enterprise in the market competition, and then determines the strategic policy, strategic focus and strategic positioning, reflects the business philosophy of enterprise decision-makers, and defines the objectives of information system (ERP) construction. ERP through the organic integration of enterprise business data and the deep processing of business data, Form useful information for high-level decision-making, so that the enterprise strategic management can be scientific, specific and operable. It can be predicted that improving the level of enterprise strategic management with the help of ERP informatization will become an important direction of enterprise informatization construction in China.

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# On the reform of business administration education from the internationalization trend of Business Administration

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**Abstract:** Business administration education is mainly to cultivate professionals who master the ability of business administration. In the face of the current international trend of business administration, managers' formulation of enterprise development strategy, response to changes in the external market environment, reduction of business costs and other issues are the main issues to be explored by business administration professionals. At present, business administration education should start from the basic management theory to make it master professional management methods. It should also start from the trend of economic globalization and business internationalization, and actively carry out the reform of business administration education to ensure that the business administration talents trained by engineering management education meet the needs of Social Business Administration talents. This paper mainly explores the problems related to the reform of Business Administration Education under the trend of internationalization of business administration.

**Keywords:** Business administration; Internationalization trend; Reform in education

## INTRODUCTION

The training of management talents and professional learning in business administration has strong applicability, and the talents trained in business administration can carry out enterprise management and improve the effectiveness of enterprise management decision-making through the application of basic theories such as management and economics. With the continuous development of the current social economy, globalization and business internationalization are the general environment for the development of the times, and the demand for business administration talents in this environment has also changed to a certain extent. In the face of the compound and innovative talents required by the current enterprise development, school education should take the initiative to start from the changes of the external environment, analyze social needs, reform educational methods and actively carry out internal optimization, Ensure the training quality of business administration professionals. Facing the current trend of internationalization of business administration, the reform of business administration

education should not only clarify the impact of this trend on professional training, but also carry out corresponding reform measures to ensure the quality of education.

## 1. THE INFLUENCE OF THE INTERNATIONALIZATION TREND OF BUSINESS ADMINISTRATION ON EDUCATIONAL PRACTICE

The training of business administration talents mainly starts from the three perspectives of teaching resource reserve, curriculum content setting and talent training assessment, so that students can master the basic theoretical knowledge of business administration and cultivate the business administration talents needed by the society under the systematic curriculum system. Facing the trend of internationalization of business administration, school education should first start from the reserve of teaching resources, clarify the training requirements of business administration talents under the background of the development of the times, and update the reserve of teaching resources. At the same time, the school should also start from the strength of teachers, cultivate excellent teachers who master advanced teaching ideas and have enterprise management experience, ensure that school education can enable students to master the enterprise business model, enable students to grasp the external market changes in the school environment, and clarify the social development changes such as business development trend and industrial structure adjustment.

Secondly, in the face of the current internationalization trend of engineering management, educational practice should take the initiative to optimize the design of curriculum content. The development of Business Administration Education in traditional colleges and universities pays more attention to the cultivation of students ability to master basic theoretical knowledge. The acclimatization of theoretical learning in practical operation affects the specific work practice of students. Therefore, in the face of the teaching practice that teachers pay attention to scientific research, education and basic theory, the current industrial and commercial management education reform in Colleges and universities should clarify the internationalization trend of business administration,

consciously set up practical courses and improve student management ability, It also makes it better respond to the management needs of the society. Finally, under the influence of the internationalization trend, the field of business administration needs management talents and compound talents who master the knowledge of other disciplines. In order to better meet the talent needs of the society, colleges and universities should not only improve the teaching effect of theoretical courses from the perspective of consolidating the professional foundation, but also start from the training of students comprehensive ability, through the continuous optimization of talent assessment methods, so as to make the comprehensive and all-round development of students quality as far as possible and meet the needs of social talents.

## 2. REFORM MEASURES OF BUSINESS ADMINISTRATION EDUCATION UNDER THE TREND OF INTERNATIONALIZATION OF BUSINESS ADMINISTRATION.

Business administration education is mainly to cultivate comprehensive talents needed for social construction. On the basis of cultivating professional business administration talents, business administration education should also analyze the external internationalization trend and explore the impact on educational practice under the internationalization trend of business administration. In order to promote the continuous promotion of engineering management teaching reform, the current business administration education can be optimized from the following angles to ensure the effect of education.

### (1) Improve teaching resources.

The internationalization trend of business administration makes it necessary to carry out the training of business administration talents in schools from the perspective of internationalization and globalization, so that students can have a comprehensive understanding of domestic and foreign social development and changes, industrial structure adjustment and economic construction. Through the widening of information control channels, students can grasp the background of project management from a more macro perspective.

In order to enable students to fully contact and understand the development and changes of society in the school education environment, the school should constantly supplement and update the hardware facilities, books, periodicals and materials. With the continuous development of information technology, the Internet era not only improves the transmission speed of information, but also widens the way of obtaining information. In the process of training students majoring in business administration, the school can use network media to broaden students vision and enrich classroom

teaching content.

Facing the problem that colleges and universities are carrying out talent training, the strength of teachers is weak. The reform of enterprise business administration education can start from the introduction of teachers and improve teachers professional ability by optimizing teachers. In view of the current social demand for the combination of theory and practice of business administration talents, colleges and universities should also start with teachers practical ability and theoretical literacy to ensure that they can carry out theoretical teaching with high quality, and improve teachers management and operation ability through teachers in-depth investigation and research in enterprises. The improvement of teachers professional ability can give students more professional guidance and promote the continuous development of students business administration ability.

### (2) Strengthen system construction

The training of business administration professionals in Colleges and universities should be consistent with the talent needs of the society. Facing the trend of internationalization of business administration, we can ensure the consistency between business administration education and social talent demand by strengthening the construction of teaching system. As an important material for developing talents, teaching materials should ensure the scientific and advanced nature of teaching organizations. We must ensure that teaching materials are consistent with the actual curriculum requirements through the constant updating of teaching resources in business administration, and that the use of teaching materials can meet the requirements of personnel training standards.

The business administration talents required by the society should have solid theoretical basic knowledge and master management practice ability. Therefore, the construction of teaching system should start from the perspective of theory and practice, not only enable students to master theoretical literacy, but also add targeted training courses to train students management practice ability through the adjustment of teaching and training plan. For teachers, in the process of teaching practice, we should not only cultivate students theoretical knowledge, but also give students the opportunity to practice, encourage students to actively carry out innovation and practice, actively analyze the management reality of enterprises, build management schemes according to the situation of enterprises and external markets, and in continuous practical training, Exercise students ability to flexibly use theoretical knowledge and promote the continuous development of students management thinking.

### (3) Innovation evaluation method

Some students do not pay attention to their thoughts and do not take the initiative in learning

knowledge. Due to the loose learning environment in universities, students often have blind problems in the learning of professional knowledge and the cultivation of personal ability. They can neither effectively understand the learning significance of knowledge nor make reasonable arrangements for personal time. In order to enable students to actively participate in the learning of professional knowledge of business administration, the school should take the initiative to innovate students evaluation methods according to their different learning and development, Make the training plan in layers and stages.

Facing the current international trend of business administration, schools should not only pay attention to the effectiveness of students basic theoretical knowledge learning, but also carry out ability training for students from multiple angles. When evaluating students, we can analyze the students ordinary examination results and judge the students learning situation in each stage. At the same time, the whole evaluation system should also use the method of process evaluation, which not only focuses on the students daily performance, but also analyzes the students management practice ability.

In the process of evaluation, take the initiative to choose diversified assessment methods, effectively master the students learning situation, build targeted education optimization strategies on the basis of grasping the situation, give full play to students subjective initiative, gradually cultivate students habit of autonomous learning, and make them comprehensively develop their personal

diversified ability under the arrangement of scientific curriculum system, To meet the complex requirements of the society for business administration talents with the all-round development of comprehensive quality.

### 3. CONCLUSION

The school educational work should be based on the situation of students and schools, and also analyze the changes of the external social environment. As a discipline that emphasizes application to practice, business administration should grasp the current international development trend of business administration in talent training and education, and improve teaching resources, strengthen system construction and innovate evaluation methods. Continuously improve the quality of business administration education through continuous innovation and optimization, and promote the all-round development of business administration students.

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# Human Resource Management System Based on Java Web

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**Abstract:** The system uses B / S mode, advanced IntelliJ idea development tools and MySQL database for the design, using java language developed a friendly interface, easy to operate enterprise human resource management system.

This paper studies the main contents of human resource system: employee information management, reward and punishment management, training management, salary management, attendance management, etc; The development goal of this system is the business logic of human resource management, which is used to achieve high efficiency and intelligence. It can help enterprise human resource managers to carry out human resource management and data analysis, as well as ordinary employees to query their personal situation in the company in time, so as to simplify the communication and management between the upper and lower levels of the company

**Keywords:** Human resources; Relational database; Java

## 1 FIRSTCHAPTER INTRODUCTION

### 1.1 Design background

With the development of social economy, enterprises have also been improved. Enterprises are constantly mature in the management of resources and personnel. Enterprises are constantly strengthening in their own development and pay more attention to internal self-management. The internal management of enterprises also has many levels and specific directions. Affected by the current era, the society has a great demand for talents, and enterprises have strengthened the management of human resources in internal management. Statisticians occupy an important position in the enterprise, and the human resource management ability also affects the development of the company. Therefore, this paper makes an in-depth study on the human resource management system, and puts forward reasonable measures, so as to provide reference for the human resource management of modern enterprises

Human resource management is a very important field in management. Through human resource management, employees can be managed effectively. Its role has greatly exceeded personnel management. Because of this, this new management model has been paid more and more attention. Effective human resource management is needed by all social organizations and enterprises[1].

### 1.2 Design purpose and significance

Human resource is the first resource of enterprises, and the competition between enterprises is the competition of talents in the final analysis. How to obtain the talents needed for their own development, how to obtain high-performance talents, and how to choose the employees suitable for the corporate culture and management philosophy are the issues that enterprises are very concerned about. Selecting good people is the foundation for enterprises to carry out all efficient management activities, otherwise, it will get twice the result with half the effort. According to a global survey conducted by a well-known international business research and consulting company, selecting people is more important than educating people for most enterprises. Sony believes that "first-class is innate", so it especially emphasizes "the first step for good talents to enter"; Microsoft believes that "it's much more important to hire the most talented people than to train and manage those mediocre people."; Marcus Buckingham and Kurt Kaufman's "first of all, break all conventions" put forward: people will not change, the selection of people is not the selection of education, not the selection of experience, but the selection of talent. Therefore, not all human resources are the wealth of the company, the right employees are. Enterprises should carefully identify talents who are suitable for the development of enterprises and have the potential to cultivate in the stage of human resource acquisition.

## 2 SECONDCHAPTER TWO DEMAND ANALYSIS

### 2.1 Feasibility Analysis

The main function of the platform is divided into seven modules: employee management, personal information, recruitment management, salary management, reward and punishment management and exit system; To strengthen the management of employees in enterprises, administrators can add, delete, modify and search, ordinary employees can only query personal information, not change and transfer;

#### 2.2.1 Economic feasibility

Analysis of the system, the operation of the system will bring great economic benefits for enterprises, mainly in the following points.

(1) This system can replace the manual to carry out many complex and repetitive information recording and statistical work, and save a lot of manpower and material resources for enterprises.

(2) Strengthen personnel information management, promote the level of all aspects of the enterprise. So that business managers from the daily trivial heavy work to rescue, and can reduce the probability of error.

(3) Managers can easily release and modify the company's employees and tasks, so as to better coordinate enterprise talents, greatly improve the utilization rate of talents, and give full play to the ability of enterprise talents.

### 2.2.2 Technical feasibility

The system is not difficult, the hardware and software technology can meet the requirements of users. In the aspect of technical software, the design of IntelliJ idea development environment is selected, and MySQL database is used to store data; In terms of hardware, 2G of memory and 300g of hard disk storage data, running speed is OK; In the aspect of system technology, Java language and MVC idea are used to realize the major function modules[2].

### 2.2.3 Operational feasibility

The system is very simple in operation. Because of the good operation interface, the system function and display content are simple and clear. Users don't need professional computer knowledge or any training. As long as a short time after the operation can master the use.

Through the feasibility analysis of the economy, technology and operation of the system, it is found that the technology of the system is quite mature, with friendly interface, simple operation, safe and reliable operation.

### 2.2 Function requirement analysis

According to the requirements of the system, the software functions that developers must implement are formulated to meet the business requirements. Developers refer to the results of the requirements analysis to refine each business implementation, so as to obtain all the functional modules of the system.

### 2.3 Other needs analysis

In enterprises, enterprise managers use human resource management system to manage employees. It can quickly, conveniently and efficiently complete the personnel management work in the enterprise, reduce the cost of human resource management, and enable the enterprise managers to focus more on achieving the greater goals of the enterprise. Then a qualified human resource management system should have the following characteristics:

- (1) High tech: the system design mainly uses IntelliJ idea development tools and MySQL database. Using Java as the development language, using MVC mode to design.
- (2) Using standard technology: the design of the system is to follow the international standardization, in order to improve the openness of the system.
- (3) Reusability: the system is designed in a modular way, and each module is designed to achieve high cohesion and low coupling program as far as possible,

so as to improve the utilization of the system.

(4) Practicality. A system is designed to meet the needs of users, all to meet the needs of users, convenient for users as the principle, try to do a comprehensive needs analysis, in order to achieve user satisfaction[3].

## 3. THIRD CHAPTER TWO TECHNICAL DIFFICULTIES AND ANALYSIS

### 3.1 Front end and rear end separate transmission

#### 3.1.1 Problem analysis

(1) The front end did not transfer the value successfully; Unable to get the value written by itself, send it back to null value, and null pointer exception occurs;

(2) The back end cannot parse the JSON sent in the previous segment, or there is an error in the corresponding field

#### 3.1.2 Solutions

Let's see if the foreground data is obtained, `VAR datestart = $('<div data-bbox="512 372 884 428" data-label="Text">

```

var dateend = $('<div data-bbox="512 427 884 482" data-label="Text">


```

If they get it, let's see if the network has successfully passed the parameters. If it can be determined that the parameters exist and passed successfully[4]
```


````

In the background controller, system. Out is a statement with arbitrary content. Judge whether you really enter the controller. If you don't enter the controller, it must be null;

In the controller, `@ requestbody` is used to annotate the received JSON object, or the data transferred to the background is encapsulated into an entity class, and `@ requestbody` is used to annotate the entity object, and the data is automatically added to the entity class

### 3.2 springData binding error

#### 3.2.1 Problem description

When using the data binding and form label of spring MVC, as shown in Figure 20, menu management: after clicking modify, 404 errors appear: the request sent by the client was synchronously incorrect

#### 3.2.2 problem analysis

In the controller control class, `@ requestmapping (value = "/ user)` is used. However, the URL displayed is `http://localhost:8080/SpringMVCFormLabel/user_edit/user_update`

More than the control class method you want to go to (because to update a method that passed through another control class before, you need to execute `/ user first)_Edit / {ID}`, executed `/ user_After edit / {ID}`, if you want to go to other places, you have to change `{ID}` and change the previous `user_Edit (reserved)`

#### 3.2.3 Solution

(1) In the original `@ requestmapping (value = / user)_Update ")` to `@ requestmapping (value = " / user)_edit/user_update")`

(2) When submitting the form, change the action to `action = " / user"_update" ;@RequestMapping(value="/user_"Update")`

(3) When submitting the form, change the action to

```
action = "/item name /
user_update";@RequestMapping(value="/user_
Update")
```

The above three methods will be more complex in complex projects. The fourth method is relatively simple and does not need to change the value in @RequestMapping[5],

Add the code to get the context when submitting, as follows:

```
(4)action="{PageContext.request.contextPath}/user_
update"
```

Note that when using the fourth method, you need to determine whether the JSP page supports EL expressions. If not, you need to add a page instruction on the top of the JSP page, as follows: <% @ page iselignored = "false!"

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# On the Application of Prefabricated Chunks in English Teaching and Learning in Applied Universities

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**Abstract:** With the continuous development of education, applied universities pay more and more attention to the practical application of English teaching and learning. With the emergence of the teaching model with prefabricated chunks, it effectively responds to the needs of application-oriented colleges and universities, and can be widely used. The prefabricated chunks are composed of multiple words, and they have specific discourse function. They are both language structure and the unity of grammar, semantics and context. With the continuous development of education, the application of prefabricated chunks in professional English teaching in applied colleges can effectively help students to combine language usage and language learning, and improve students' language knowledge and skills to a higher level and development to a higher stage. This paper researches and discusses the application of prefabricated chunks in English teaching in applied universities.

**Keywords:** Teaching model with prefabricated chunks; applied colleges and universities; English teaching

## INTRODUCTION

The theory of prefabricated chunks was first proposed by Becker, a famous foreign linguist. According to this theory, language is used by people in the form of some fixed or semi-fixed chunk structures. Today, specialized English teaching in application-oriented colleges and universities mainly offers related courses for the needs of related professions or specific subjects. It is aimed at the actual needs of students and further cultivates students' language ability and language work ability. It has strong practicality, such as architecture English, business English, etc.. The prefabricated chunks have vital positive influence in the teaching of professional teachers and the learning of students. This paper analyzes and discusses how to effectively use prefabricated chunks in the English teaching of applied colleges and universities.

### 1. THE BASIC THEORY OF THE PREFABRICATED CHUNK TEACHING MODEL

#### 1.1 Definition of prefabricated chunks

Prefabricated chunks have been the key research content of scholars at home and abroad in decades of

development history. The researchers aim to reduce various errors that may occur in the actual teaching process through prefabricated chunk teaching, and promote language learners' confidence and enhance their language skills [1]. Prefabricated chunks are different from the concepts of traditional vocabulary and grammar. They generally consist of two or more words. Therefore, prefabricated chunks belong to the intermediate of vocabulary and language. Wray, a foreign scholar, clearly pointed out in 2002 that prefabricated chunks are to integrate coherent or incoherent vocabulary together and store them in the learners' memory. And then the learner can extract it directly when needed without analyzing and summarizing according to grammar. At that time, the prefabrication, fixity and ease of extraction of prefabricated chunks are reflected. The prefabrication is mainly reflected in the fact that the prefabricated chunks are not composed according to the grammar when they need to be used, but have been stored in people's memory before [2]. Fixity is also called integrity, which means that the prefabricated chunks cannot be analyzed and replaced with other content and belong to a whole. The combination of prefabrication and integrity allows the prefabricated chunks to be stably stored in people's memory. At this time, the prefabricated chunks are also easy to be extracted. From the research of domestic scholars, Wei Naixing once clearly pointed out that from a data-driven perspective, prefabricated chunks have both the characteristics of vocabulary and grammar, and can play a unique discourse function. Wang Lifei [3] proposed in 2009 that prefabricated chunks can be retrieved by computer, and they belong to multiple vocabulary continuous phrases with high occurrence and unique meanings. In summary, different scholars have different definitions of prefabricated chunks, but they have common feature that multiple vocabularies are stored in the learner's memory, which is prefabricated, fixed, and easy to be extracted, and can play a unique language function.

#### 1.2 Classification of prefabricated chunks

The classification of prefabricated chunks is mainly from the perspective of structure and function. In 1992, foreign scholar Lewis divided the prefabricated chunks into four categories, namely, aggregate phrase, collocations, idioms, sentence frames, etc.. Generally,

aggregate phrase is composed of two or more words, such as all in all. Collocations refer to a simultaneous relationship structure formed during long-term use. Idiom is a kind of prefabricated chunks that is frequently used. The sentence frame generally includes multiple original discourse resources, and the context is connected under the combination of the original discourse resources. Such classification method of prefabricated chunks has a strong generality and is widely recognized by scholars at home and abroad [4].

## 2. THE APPLICATION OF PREFABRICATED CHUNK TEACHING IN APPLIED ENGLISH TEACHING

### 2.1 Prefabricated chunk teaching model and English vocabulary teaching

The prefabricated chunk teaching model helps students overcome the disadvantages of mechanical memory in the vocabulary learning process to a certain extent. It not only helps students to learn and remember vocabulary faster, but also effectively develops students' ability of vocabulary learning and language communication, as well as the ability of language usage. Chunk teaching is not only limited to the original knowledge content, such as vocabulary and grammar, it also extends to the process of cultivating students' pragmatic competence. The chunk teaching model can help students to remember quickly in terms of vocabulary, and train students to express their thoughts and emotions fluently with the use of common collocation blocks, and realize the professional purpose or communicative meaning of future employment. In daily professional English teaching, teachers can input a large number of professional vocabulary blocks when conducting vocabulary teaching. At the same time, they need to build a certain situation to substitute students into them, so that students become more proficient in vocabulary blocks, fully practice, and strengthen their mastery and use of vocabulary chunks. In more professional vocabulary teaching, the use of prefabricated teaching mode, a new educational approach, can help students quickly input vocabulary and effectively output vocabulary [5].

### 2.2 Prefabricated chunk teaching model and English reading teaching

In the teaching of College English reading in applied universities, in addition to the expansion and learning of vocabulary, the cultivation of reading ability has also been paid attention to. Students should not only master the professional lexical chunks of relevant majors, but also be familiar with the sentence building chunks in professional English articles. For instance, the sentence that it is believed / said / known that... is used to express opinions, and that Given... is used to express conditions, etc. Some prefabricated chunks can connect the full text and organize the text. They play a positive role in both the micro sentence and the macro ideological expression

and structure of the full text. Therefore, if students have a deep enough understanding of prefabricated chunks in the process of reading, they will have full understanding of the structure and analyzing the theme of the full text. For the application of prefabricated chunks in reading teaching, teachers need to introduce some reading strategies related to prefabricated chunks to help students make full use of prefabricated chunks and improve their reading ability of English texts. The prefabricated chunks taught by teachers can provide symbolic hints of information structure for students in daily life or formal assessment process. On the basis of being familiar with and mastering such chunks, students can quickly grasp the overall idea of the reading article, effectively improve the speed of English discourse reading and promote their understanding of the discourse.

### 2.3 Prefabricated chunk teaching model and oral English teaching

It is undeniable that in more professional and practical English teaching, such as business English and architecture English, the importance of oral English should not be underestimated. Such kind of professional English teaching focuses on cultivating learners' ability to carry out relevant foreign-related communication and research in their jobs, and pays more attention to the practical application and output ability of English. Oral English is an important part that can not be ignored in the process of output [6]. The fluency of spoken English is also closely related to English chunks to a certain extent. In daily real oral communication, the sentences people use in communication are not simply the arrangement of English words, but will skillfully apply the chunks that meet the dialogue situation to a greater extent. In oral English teaching in applied universities, teachers should pay more attention to students' learning of chunks, so that students can enhance their awareness of chunks, actively identify and summarize a large number of various chunks in daily learning, and finally form inertial thinking or qualitative memory, so as to greatly improve the efficiency of students' oral output and the accuracy of oral expression, and realize the effective progress and great enhancement of oral communication ability.

### 2.4 Prefabricated chunk teaching mode and English writing teaching

Listening, speaking, reading, and writing all have a status that cannot be ignored among English students. The four are all aspects that need to be developed to improve English. In the English writing composition of applied college students, there are common phenomena such as improper collocation of words, Chinglish sentences, and lack of cohesive means in texts, which lead to poor coherence of the article, unclear language logic, and unnatural cohesion and transition of the article. The learning of prefabricated chunks can help students effectively overcome the

above undesirable phenomena. It can effectively improve the efficiency and proficiency of composition writing, and improve the writing with fluency and professionalism. And it is more eye-catching and attractive. In the teaching of writing, students should master the organizational blocks of the beginning, transition, and ending parts of various types of articles, as well as demonstrative blocks that indicate the relationships of cause and effect, progression, transition, enumeration, and so on. Through the application of the above language chunks, students' ability of information organization can be enhanced, and the expression of the article can be more standardized and vivid, and finally students' confidence in English writing can be enhanced [7]. In daily writing teaching, it is necessary to strengthen the input of chunks, consolidate the chunks through various methods such as regular memorization and expanding the amount of reading, and strengthen the practice of chunk output through sentence translation, essay translation and writing.

### 3. CONCLUSION

With the rapid development of education, people's demand for talents is increasing, and the requirements for talents are also increasing. English has become one of the important majors that cannot be ignored in almost all applied universities. The prefabricated chunk teaching model focuses on the cultivation of students' practical application ability of English, which not only meets the requirements of today's talent training, but also benefits English majors. Through the integration of the prefabricated chunk teaching model with vocabulary, reading, speaking, and writing of teaching, it effectively improves the English quality of students majoring English and contributes to the cultivation of national talents.

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# Operations Development Report-The Evaluation of Three on the Bund Shanghai

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**Abstract :** Three on the Bund is a historical and cultural building on Shanghai , it was rebuilt as a comprehensive commercial entity. Nowadays, COVID-19 has a huge impact on the tourism and hospitality industry. This paper takes Three on the Bund Shanghai's operating status in 2015 as an case study to analyse, hoping to provide a thought for future tourism and hospitality operation research in the "Post-Epidemic" Period.

**Keywords:**Operation development; Tourism ManaHospitality; Resources analyse;

## 1. INTRODUCTION

In this multifaceted contemporary society, operation is playing a very important role in the development of enterprises. An effective operation is able to lead to a successful business. Managing the process of transforming inputs into outputs to create value in goods and services is what enterprises should do. The main purpose of an enterprises operations is using minimum cost to reach the maximum value to their consumers . Therefore, managing the produce process and resources to satisfy the market needs is the vital factor to enterprises development. In the hospitality industry, operation is everywhere. For example, house keeping clean the room, bell boy carry luggage for their guests and trainer ensure their employees have qualified skill to contribution to the business. Those things are parts of the operation. Those independent things will create a better operational capability for the hotel when combining those independent things reasonable and effective. Three On The Bund as a leader in Shanghai hospitality industry, it hailed as Shanghai's finest epicurean destination. This report will critically evaluate Three On The Bund operation department operational capabilities with their resources and process to align that their market demand. The report mainly divide into three parts: how Number Three On The Bund use their tangible and intangible resources create their operational capabilities and meet their customers market needs, then use relative theories to evaluate how their process contribute to their operational capabilities and market requirement as well.

Brief introduction of Three On The Bund Number three on the bund was built in 1916, and it has been a famous building since 1916. In 1997, Giti

group purchased the building with the vision of reinstating the Bund's glory and commissioned acclaimed American architect Michael Graves for the restoration project (TOTB, 2008). Then Three On The Bund reopened in 2004 to public by Three House Ltd. under Giti Group. Nowadays, Three On The Bund mainly have four different stylish restaurants on different floor in their operation department. The target market of TOTB is consumers which has the certain expense ability, such as traveler , businessman and government officer. Their main needs are a beautiful view, delicious cuisine and high standard service. In the following part, how Three On The Bund aligns with their customers need, which will be analysis from their resources and processes.

## 2. RESOURCES

Resources include all key elements that improve the enterprise's efficiency and effectiveness in their operation strategies making. For example, the assets, capabilities, orgainsational processes, firm attributes and technology. An enterprise must be able to identify its resources. As mentioned previously, Three On The Bund's target market decided it should configure their resources reasonably to match their market demand. In fact, Three On The Bund applied a significant number of resources into its operation to improve its operation capability and performance. Theoretically speaking, business resources consists of two sections: one is tangible, such as location, customers and technology while the other is the intangible resources , that is customers' feeling and relationships.

### (1)Tangible Resources

#### Location

Making business location decisions is the most important step for enterprise preparatory stage (Schmenner, 1983). It has the power to make or break a enterprise's business strategy (Bartness, 1994). The enterprise may should consider many sides from their decisions, for instance, the local purchasing power, local competition, transportation and local labor market (Heizer & Render, 2004). Shanghai is the biggest commercial city and economic center in China. It has the best resources such as international airport, biggest port in south of China, that had driven Shanghai to be a huge tourism market. Three On The

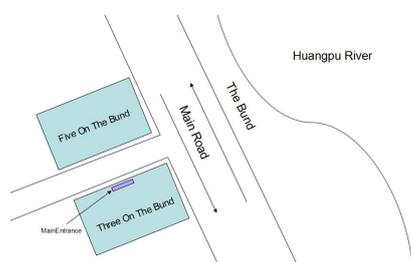
Bund is not only located in the prime location which near the Huangpu River, but also the most famous historical street in Shanghai. Moreover, the Bund is also a vital prosperous area in Shanghai. Dense population and convenient transportation net help created a huge consumers market advantage for the company which is located at the Bund.

**Design**

As a famous historical building on the Bund, the building itself is the important elements of Three On The Bund's sale and promotion activity. The historic environment can make a significant contribution to economic prosperity. It is designed in Neo-Renaissance style with some Baroque style details on the exterior. The main gate and the balconies on the third and fifth floors were decorated with carved long Ionic columns, while the window panes at the door and two sides were trimmed with Baroque style spiral patterns. On the roof, POP America restaurant tries to bring their customers back into the 70's in the America. With the vintage chandelier, the curved leather and the visual collages which altogether present the concept's essence upon entering the experience. Willett mentioned that the restaurant is not only making of the delicious food which may makes or breaks a restaurant, design is also an important factor for customers' enjoyable dining experience (Willett, 2012). In general, Three On The Bund use their different decoration styles to construct a great feel in their customers' mind. The decoration then can make their guests have strong curiosity and thus have desire to have a meal in those restaurants.

**Layout**

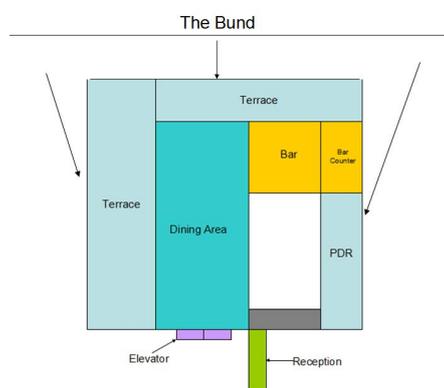
Slack, Chambers and Johnston claim that is layout of an operation means how its transformed resources are positioned relative to each other and how its various tasks are allocated to these transforming resources (Slack, et al, 2010). In the following part, the advantage and disadvantage of Three On The Bund's layout will be analysed.



Picture 1 Entrance

As Picture 1 shows, there is Three On The Bund main entrance which is not opening to the main road and the Bund, but is opening to a one-way street. This kind of layout is absolutely inconvenient for Three On The Bund's customers. Most of customers who want to have a dining in Three On The Bund find it is hard to find a way to go inside the building for their first visit on this building. Meanwhile, the tourists

who are walking on the Bund even do not know Three On The Bund is a restaurant which is offering delicious cuisine. Furthermore, the one-way street is another weakness of Three On The Bund as well. Customers' car that drive on the main road can't turn right on that T-junction to reach the main entrance of the building. They have to drive straight to the next crossroad for approximately one mile distance to arrive at the main entrance. Unfortunately, a part of their customers will get lost when driving for this one mile distance to get there because the roads in this area are very complicated. A significant number of their customers complained this main entrance problem since Three On The Bund opening. However, the problem still exists and this seriously affected the operation capability of Three On The Bund.

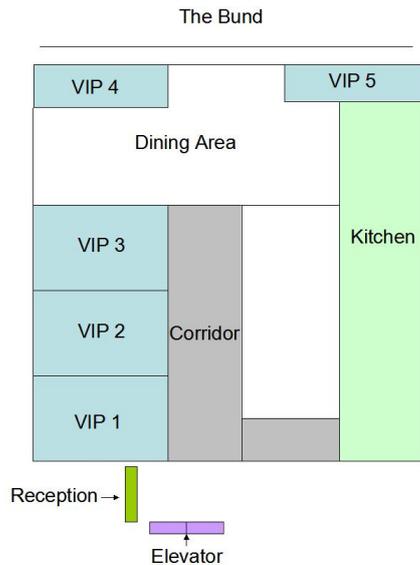


Picture 2 Building

However, there is still examples of demonstrating good layout for the building. The POP America restaurant is a good example to explain the advantage of layout in Three On The Bund. Picture 2 shows that The POP America restaurant has two terrace and a private dining room which can view the Bund and Huangpu river directly. The POP America restaurant reasonably chooses the good layout of three sides of viewing to build its dining environment, optimally meet its guests desire of enjoying the scenery and taste requirements. Consequently, it improved the operation capability for Three On The Bund.

**Private dining room**

Under normal circumstances, a comfortable and private dining environment may improve a restaurant's image (Baraban & Durocher, 2010 ).



Picture 3 Whampoa Club

Whampoa Club has five private dining rooms, as picture 3 shows. Every single room is independent and private provide service to its customers. If necessary, VIP room 1, 2 and 3 can combine into one large banquet room which can occupy at least 160 people. It is the biggest banquet room on the Bund which can satisfy the customers' demand for large banquet place.

## (2) Intangible Resources

### Employee skill

Harvard Business Review in 2004 mentioned that the skills and talents of employees are company's intangible assets, and they are much more worthy than many company's tangible assets. Staff training is a important project that has always been taken seriously by Three On The Bund. The training department does not only pay attention to training their staffs have service skill, but also try to develop the talent of their employees. Every month, training department holds four routine training projects and it includes one event and three basic skill trainings for their employees. Most events will organise some activities for staff to play some team building games, such as basketball competition and Outward Bound. The main purpose of these activities is to build the teamwork and also to help their staff releasing the pressure from the work. This approach can be a right way to make their employees' work more both effectively and efficiently. The project of basic training is providing some language and communication skill. Each restaurant also has different training projects such as wine training, new products sales training and service skill training. Those projects can help employees to master more skills in order to deliver a better service for their guests and then match customers' expectations.

### Customers' feelings

Customers's feedback may reflect the feeling of customers intuitively, and customer feedback collection tools can be categorized into two types:

active and passive. Active tools can solicit customer responses through customer satisfaction surveys. In the other head, passive tools rely on the consumer's own willingness to report complaints and experiences (Wirtz et al, 2009). Customer's feedback is a valuable asset for restaurants operation which can be a guild-line to evaluate the strengths and the weaknesses from consumers. Three On The Bund always uses the active feedback collection tools to collect their consumers' feedback. The restaurant manager asked its customers about their feelings on quality of cuisine and services while they are dining in the restaurant. After that, operation department then will summarise the strengths and the weaknesses based on the survey and then design a new solution to meet the consumers' needs.

### Customers relationships

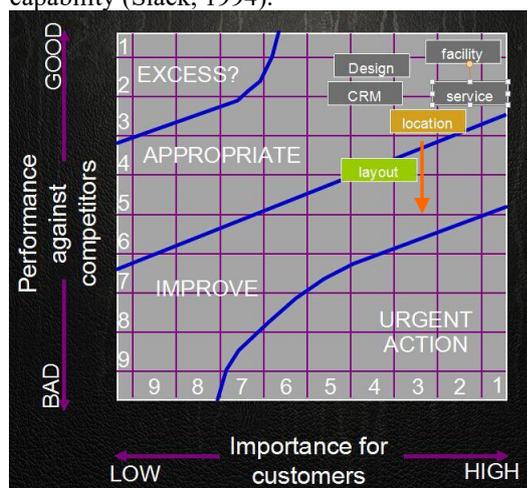
Nowadays, many companies try to build relationships to new as well as existing customers to boost long-term customer loyalty. Managing the relationships with customers should require a strong coordination between the information technology and marketing department's support. Three On The Bund has already built a data base for every consumers in the building. This data base records the contact information, feedback and customers' preferences such as dining place preference. Next, Sales & Marketing department will analyse those data and find out the potential customers who may come back again. After that, greeting text messages or e-mails will be sent to their customers, and inform customers what the latest products and promotions are. Those text messages or e-mails can make their guests to enhance the image and loyalty on Three On The Bund, and bring up the favour-ability of customers to this place, which can make them to purchase again.

### FINDINGS

The previous processes link with resources altogether and find out that they can achieve five factors of performance objectives module (Slack, 2010). Three On The Bund spend a lot of money to train their staff, but the value that employees' contribution for their business is far beyond training cost so cost is valuable for Three On The Bund. High standard service and quality of cuisine guaranteed that its quality that other competitors can not compete with. The advanced facilities and constant practice and training of employees increase the speed of delivery which ultimately increase the level of satisfactory of its consumers. The consistency of process design and core competence and also the periodical update can show the flexibility of the company. In the other hand, outstanding tangible and intangible resources can enhance the dependability for Three On The Bund.

Slack in 1994 claims that "The Importance - Performance Matrix" which is using this module evaluates the each part business resource's situation and then it can summarise company's operation

capability (Slack, 1994).



The importance-performance matrix  
Picture 4

Based on evaluation in this report and comparison with other competitors, Three On The Bund has been doing well in satisfying its customers' demand. As picture 4 shows, Three On The Bund has advantages for its operation capability against its competitors. However, the layout section mentioned that the layout of main entrance should be solved as soon as possible, otherwise the ability of performance against competitors will decrease which lead to threats to company's operational capability(Sampson, 1996).

CONCLUSION

To conclude, the company's operation must be able to match with the market and create products that customers find are valuable but competitors find difficult to copy (Slack et al, 2009). As one of the leaders of Shanghai hospitality industry, Three On The Bund has been at the stage of discovery process, continuously making improvement, which aims to meet the demand of market. It needs to keep its existing competitive advantages and always make improvement simultaneously. In the near future, it will definitely be more successful.

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# Application of Virtual Reality Technology in 3D Animation Production

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**Abstract:** Virtual reality technology refers to a computer-generated technology that can directly impose visual, auditory, and tactile sensations on participants and allow them to interact with each other to observe and operate the virtual world. In recent years, with the development of information research technology in China, the development speed of computer hardware technology has also shown a trend of rapid growth, and the process of 3D animation production has also made full use of virtual reality technology. Therefore, based on the understanding of virtual reality technology, this paper analyzes the correlation between 3D animation and virtual reality technology, so as to deeply explore the application of virtual reality technology in 3D animation production.

**Keywords:** Virtual reality technology; 3D animation; Application characteristics

## INTRODUCTION

Virtual reality technology emerged in the 1980s and it is a comprehensive integrated technology involving multiple technologies such as intelligence, computers, and remote sensing. After entering the 21st century, with the rapid development of computer technology, virtual reality technology began to appear and was widely used in 3D animation production, urban construction planning, digital museums and many other real life fields. At the same time, with the continuous innovation of virtual reality technology in the process of 3D animation production, this technology has been fully developed in the field of film and television entertainment. Based on the demand of 3D animation production, the animation can greatly improve the experience of 3D animation and maintain its real-time and interactivity.

### 1. OVERVIEW OF VIRTUAL REALITY TECHNOLOGY AND 3D ANIMATION

3D animation is a technology that has emerged with the continuous development and upgrading of computer technology in recent years. Its development mainly depends on the continuous upgrading of computer software and hardware. It is not restricted by time, space, location, conditions, and objects, and it is good at using various forms of expression to express abstract content and concepts through concentrated, simplified, vivid, and vivid forms. Therefore, whether 3D animation technology is applied in online games or in the film and television

works, the surreal scenes created by 3D animation have shocked audiences and players, and are popular in the film and television entertainment market.

Virtual reality technology is a comprehensive and practical technology developed in the 1980s. It mainly includes computer electronic information integration, simulation technology, etc. It is mainly to simulate the virtual environment through computer technology to bring people a real sense of immersion in the environment. It has received more and more attention and recognition in recent years, and different users can experience more real feelings in the virtual environment simulated by the computer. At the same time, virtual reality can also satisfy the perception system possessed by human beings. In addition, it also has a simulation system, which truly realizes human-computer interaction, allowing users to operate and get feedback during use.

Since the 21st century, the frequency of using virtual reality technology in the production of 3D animation has increased. Through virtual technology, computer technology and human-computer interaction design, it can be effectively integrated with the content required by 3D animation. Based on the construction of virtual environment, it provides people with more real cognition and methods to explore the unknown world [1].

### 2. APPLICATION OF VIRTUAL REALITY TECHNOLOGY IN 3D ANIMATION PRODUCTION

#### 2.1 3D animation modeling with virtual reality technology

The development prospect of virtual reality technology is attractive, and the combination with the characteristics of computer is what contemporary people pursue. In terms of 3D animation production, it will change people's traditional way of thinking, and even change the definition of world, space and time in 3D animation production. For example, 3D animation modeling can build the scene in animation through virtual reality technology, find the problems in animation production and formulate solutions in time. The picture composition of 3D animation is based on the modeling of animation character model and the construction of animation scene. Its basic task is to simulate and draw the character image model and related scenes in animation. By using virtual reality technology in animation modeling, more human-computer interaction and simulation

technology can be added to improve the audience's deep understanding of 3D animation [2]. To realize the relevant modeling scheme of 3D animation, the relevant designers should first of all collect the materials related to the scenes and characters related to the animation content. The staff responsible for animation design should sort out the field shooting materials in advance according to the relevant building materials and natural scenery, which can also provide more effective materials for the application of virtual reality technology simulation and further improve the level of virtual technology production in 3D animation.

### 2.2 Motion capture of moving objects in 3D animation with virtual reality technology

The introduction of virtual technology in the process of 3D animation production can track some of the more difficult motion capture systems in the animation production process to obtain the movement information of the object, and then obtain the data required in the production of 3D animation through computer related processing, so that it can be used in subsequent 3D animation production. And it is also convenient for subsequent directors to place shooting lenses in any place to complete lens shooting that is difficult to achieve [3]. In recent years, 3D animation production is one of the projects that apply virtual reality technology widely. For example, in the process of 3D animation production, when the requirements for real-time pictures are not strict, in order to ensure the animation quality, the action of each picture is consistent, the action of moving objects can be captured and the relevant data can be simulated by computer to help the director and post production complete many difficult scenes that were difficult to achieve before. In this way, it can not only make the audience observe the specific scene clearly, but also improve the audience's sense of substitution and shorten the distance between the audience and the animation. In 3D animation production, the motion capture of moving objects is applied to the perceptual information and model in virtual reality technology, so the requirements for system integration technology are high. A realistic animation model is constructed through computer information synchronization, data conversion and recognition synthesis technology to help 3D animation to produce the non-existent environment, the environment impossible for humans to reach, and to construct a purely fictitious environment.

### 2.3 Adjusting the application of 3D animation production with virtual reality technology

The introduction of virtual reality technology in 3D animation production should not only focus on the full use of virtual technology to obtain relevant

information from the picture capture system, but also guide people to fully grasp various production methods and realize their combination and application. Virtual reality technology is widely used in 3D animation, and computer has been applied to a new level. Its role and significance in animation production are obvious. Virtual reality technology can reasonably use adjustment technology to enhance the authenticity of animation scene, and use computer data processing technology to analyze the data. And the data parameters of relevant aspects are adjusted for many times to ensure that the data parameters can meet the requirements of animation production. At the same time of 3D animation production, the staff can also modify relevant data parameters by bringing in and overlapping, and carry out production procedures for 3D animation through multiple adjustment of data parameters, so as to generate a qualified animation production system.

### 3. CONCLUSION

With the continuous learning and improvement of virtual reality technology, combined with the actual situation of 3D animation production in China, the way of 3D animation production is used to describe the fragments of future life to people, to help users to use their rich imagination to realize the vision of the future. Moreover, users can experience the past history and express the feelings of the past and the present. Therefore, in the process of 3D animation production, virtual reality technology is extremely important, and relevant personnel need to attach great importance to it, continuously improve the technology, and use virtual reality technology to help the audience obtain a sense of realism and immersion, fully reflect the advantages of virtual reality technology, and then promote the comprehensive and healthy development of 3D animation industry.

### ACKNOWLEDGEMENT

This paper is the research result of the 2020 Pingdingshan University Excellent online open course fund project "3D Animation Production".

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# Problems and Countermeasures in Brand Building of Small and Medium-Sized Enterprises

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**Abstract:** with the increasingly widespread phenomenon of product homogenization, the status of differentiation strategy is increasingly realized, and brand differentiation is the core for enterprises to win the market competitive position. Therefore, small and medium-sized private enterprises form brand differentiation based on the development of brand, so as to obtain competitive advantage in the market.

Today's era has entered the era of brand. More and more customers have begun to deepen the concept of brand and tend to buy branded products. Good brands form certain brand loyalty. Brand loyalty enables customers to think and analyze relevant information too much when buying goods. They can directly choose brand goods, deepen their goodwill through the use of goods, and improve customer brand loyalty.

**Keywords:** Problems, countermeasures, brand building, small and medium-sized enterprises

## 1. ANALYSIS ON THE BACKGROUND AND CURRENT SITUATION OF BRAND CONSTRUCTION OF SMALL AND MEDIUM-SIZED PRIVATE ENTERPRISES

The small and medium-sized private economy really developed after the reform and opening up in 1978. In the past 30 years of reform and opening up, China's economy has developed rapidly and small and medium-sized private enterprises have sprung up. However, the development of small and medium-sized private enterprises does not seem to be ideal. One of the most remarkable characteristics is short life. There is a serious "meteor phenomenon" in small and medium-sized private enterprises. Generally, the golden period for the real development of small and medium-sized private enterprises is 2-4 years. After that, they either go bankrupt or stagnate for a long time. The reason is that the brand strategy error is one of the important reasons. Therefore, small and medium-sized private enterprises must correctly implement the brand strategy if they want to prosper.

## 2 MISUNDERSTANDING OF BRAND CONSTRUCTION OF SMALL PRIVATE ENTERPRISES

### 2.1 small enterprises cannot be brands

This is the brand misunderstanding of many small and medium-sized enterprises. The author believes that these small and medium-sized enterprises do not

grasp the connotation of the brand. The brand is like a person's character. No matter the poor or the rich, they all need character. For enterprises, they also need "character", which can be understood as a collection of integrity and sense of responsibility. The process of brand building is the process of continuously reaching and gradually strengthening consumers' trust in enterprises and products. Because of the weak resources, small and medium-sized enterprises need to make brands and let consumers have a strong sense of trust in their brands[1]. So as to occupy a certain market share, it can be said that brand management is the most effective and lowest cost competitive means for small and medium-sized enterprises to obtain profits.

### 2.2 advertising is equal to branding

Most small and medium-sized enterprises believe that advertising is equal to making a brand. It is undeniable that advertising does play a certain role in brand building, but its function is not omnipotent. Strong advertising can rapidly improve the popularity of enterprises in the short term, but the reputation and credibility need several years, more than ten years or even hundreds of years of accumulation to complete, not overnight. There has been a short-lived phenomenon in CCTV. Private enterprises such as Qinchu and Aido regard advertising as the only means to establish a brand, while ignoring the improvement of reputation such as product quality, corporate reputation and after-sales service, resulting in the separation of popularity and reputation, and finally leading to the disappearance of the brand.

### 2.3 technology is the premise of brand building

Whether a brand can be established or not has little inevitable connection with unique technology. In fact, the more there is no core technology, the more you need to build a brand. Because products with core technology are naturally very competitive. We all know that ceramics and paper were invented by the Chinese, but the best brand in the world is in Japan. Perhaps no one could have imagined that the largest selling traditional Chinese medicine products in China originated from Chinese grass roots and are "Amway Nutrilite" as "nutrition and health care products". It can be seen that there is no inevitable connection between unique technology and brand. Therefore, technology is not the premise of brand building. At present, product homogenization caused

by technology homogenization is a common trend in almost all industries. Homogenized products should be differentiated by the concept of travel alienation.

### 3 PROBLEMS IN BRAND CONSTRUCTION OF SMALL AND MEDIUM-SIZED PRIVATE ENTERPRISES

3.1 the enterprise lacks brand management concept and brand management awareness

At present, most small and medium-sized enterprises in China still stick to the old business philosophy and business model, and do not realize the arrival of the era of brand competition[2]. Moreover, these small and medium-sized enterprises only take into account the immediate interests, are keen on OEM or processing for others, refuse to accept the brand management or management concept, or although they are brand management, they mostly achieve the purpose of marketing through brand speculation, Did not really realize the core value of the brand.

3.2 the enterprise lacks overall brand strategic planning

Throughout the development history of some major brands in the world, except Microsoft, they have experienced decades or even hundreds of years of accumulation. Many of them are "century old stores". Although the plan is surprisingly long, it reflects that the company's existence and pursuit exceed the pursuit of a generation of entrepreneurs, and truly reflects the broad-minded and far-sighted entrepreneurs. In the past, small and medium-sized enterprises lack the overall planning of brand to enterprise, which does not mean that they must formulate hundreds of years of brand strategic planning like Panasonic, but there should be at least five or ten years of strategic planning. However, most domestic small and medium-sized enterprises only consider the immediate interests and ignore the long-term interests. The phenomenon of "brand marketing myopia" is more prominent.

3.3 the brand positioning of the enterprise is not clear enough

The so-called brand positioning is to strongly shape the distinctive and impressive personality or image of the enterprise according to the position of the competitor's brand in the market and the attention of consumers to the brand, and vividly convey this image to customers through the formulation of a specific marketing combination, so as to affect customers' overall feeling of the brand. Many small and medium-sized private enterprises in China often ignore the importance of brand positioning. The brand positioning is inaccurate. They always hope that they are the "all-round champion" of the market and hope to pass all the benefits of products to customers, but the result deviates from the expectations of enterprises[3].

### 4 MEASURES FOR BRAND BUILDING OF SMALL AND MEDIUM-SIZED PRIVATE ENTERPRISES

4.1 strengthen brand awareness and realize the importance of brand construction

China's small and medium-sized private enterprises have insufficient understanding of the market value of the brand, which is mainly manifested in the lack of a deep understanding of the brand. Therefore, small and medium-sized private enterprises should realize that brand is an intangible asset of enterprises, which will bring more additional benefits to enterprises and be conducive to the long-term development of enterprises. Only by paying attention to brand construction can small and medium-sized enterprises really develop and grow“ Sony "was only a small enterprise of electronic transistors in the 1950s. Because it has always adhered to its own brand development strategy, it finally created a well-known international brand. The main measures for small and medium-sized private enterprises to enhance brand awareness and establish brand concept include:

Enterprises should first cultivate a group of professional talents with brand awareness and brand management concept, especially managers' brand awareness and brand concept. Because managers play a vital role in the development of enterprises, only when managers have this awareness and concept, can they instill the brand concept into employees. Although it may increase the cost of enterprises in the short term, in the long run, the advantages outweigh the disadvantages. Hold various lectures on brand, invite famous scholars and entrepreneurs to the enterprise for various forms of lectures, gradually update employees' brand concept and establish brand awareness. By taking necessary incentive measures, the enterprise can give spiritual or material rewards to those who have made meritorious contributions to brand building.

4.2 establish a comprehensive brand strategic plan

Brand strategy is a series of long-term and fundamental overall plans and plans based on the enterprise's development strategy and around the brand in order to improve its core competitiveness. Successful brand strategy is the construction of enterprise culture. It involves all major strategic schemes of enterprise management, such as the cultivation of enterprise core competitiveness, the construction of enterprise culture, the improvement of product quality, technological innovation and development, etc. Brand strategy does not solve local or individual problems, but overall problems. It is a long-term concept[4]. Its focus is not the current or the near future, but the medium and long term. Brand building is a systematic project. The implementation of brand strategy should be comprehensively considered according to the scale, strategy and market environment of the enterprise. Due to the lack

of human, talent and material resources, small and medium-sized enterprises can cooperate with professional brand consulting companies to plan their own brand strategy under certain capital conditions.

#### 4.3 clarify the market positioning of the brand

The so-called market positioning is that the object and grade of your products meet the needs of the market, Cong consumer demand positioning, and establish high-end brand, middle-end brand and low-end brand series. Secondly, from the brand stage to the brand positioning, the first stage is to establish a qualified brand; The second stage is to establish the city brand; The third stage is to establish provincial brands; The fourth stage is to establish a national brand; The fifth stage is to establish international brands. Thirdly, positioning from the brand level, the first level is the product brand stage; The second layer is the stage of enterprise brand; The third level is the industrial brand stage. The key for small and medium-sized private enterprises is to make clear that they are serving at that level, and then carry out targeted marketing activities for their customers. If the brand lacks a clear market positioning, it will be like a ship without a rudder. At the same time, in terms of market positioning and selection, we must develop strengths and avoid weaknesses. While grasping and making use of opportunities, we should start with our own advantages and select the market most suitable for enterprise development strategy. Thirdly, the brand market positioning of small and medium-sized enterprises should be misplaced with the market positioning of large enterprises.

#### 4.4 refine and improve the core value of the brand

The core value of the brand is the soul and essence of the brand. The establishment of the core value of the brand is not achieved overnight. The refining of the core value of small and medium-sized private enterprises must carry out comprehensive and scientific brand research and diagnosis, fully study the market environment, industry characteristics, target consumer groups, competitors and the situation of the enterprise itself, provide detailed and accurate information guidance for the brand strategy, and refine highly differentiated Clear, clear and can infect the core value of the brand in the hearts of consumers[5]. Once the core value of the brand is determined, it should be implemented in various activities of the enterprise.

4.5 establish a crisis early warning mechanism and crisis management model for small and medium-sized enterprises

First of all, every small and medium-sized enterprise should have the consciousness of "thinking of danger in times of peace", because it does not have the good ability of crisis handling and crisis recovery like large enterprises, so small and medium-sized enterprises must pay attention to it ideologically; Secondly, small and medium-sized enterprises should formulate perfect brand crisis management plans according to their own structural characteristics, including brand crisis emergency plans and crisis communication plans; Thirdly, in the design of response plan, we should formulate strategies according to the environment, improve the enterprise recall system, reduce the loss of intangible assets as much as possible, analyze the response of competitors, prepare long-term response plans, and formulate communication strategies for the media, customers and the public. Otherwise, it will cause the damage of the brand image and even the disappearance of the brand.

#### Conclusion

Brand is not only the most valuable asset of an enterprise, but also the source of its core competitiveness. The road of brand building of small and medium-sized private enterprises is still very long. Small and medium-sized private enterprises can have a place in the fierce market competition only by strengthening brand awareness, refining brand and enhancing brand core value, and making comprehensive strategic planning.

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# The Studies on the Translation Strategies of the Scientific English

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**ABSTRACT:** With a steady progress of the general English, English for science and technology (EST) has become a momentous pragmatic text for boasting of the accurate content, rigorous structure and concise and logical language features. The diction of EST is characterized with the honest and smooth principle to achieve an accurate vocabulary translation and a coherent structure on the intralingual translation. And based on the language description form lexical level, syntactical level and the contextual level, this paper emphasizes the promotion of translators' translation skills of EST. According to the characteristics of scientific English, the research translation skills have pointed out to help the translators translate well.

**Keywords:** translation studies; pragmatic text; scientific English; language description and contextual level

## 1. INTRODUCTION

The pragmatic translation studies include a wide range of pragmatic texts. It studies the exploration of the translation principles, translation techniques of lexical, syntactical, stylistic and rhetorical levels and analysis of errors in pragmatic translation. This paper talks about the scientific English translation's strategies. In terms of formalization, scientific words and papers are the highest formal degrees in the literary style, but popular science reading is the lowest level; technical text covers a wider range, and it has many formats and characteristics depending on many different industries at the same time. Although the EST has many variants, it also has many common characteristics according to its nature, such as multifunctional purpose and professional in words, objective and accurate on statement, accurate and concise in the language usage, and strict in logic and so on.

## 2. THE ORIGIN AND DESCRIPTION OF SCIENTIFIC ENGLISH

With the development of science and technology, a new type of writing or an independent science was established and developed in London in the middle of the 20th century. The English for science and technology (EST) is a branch of the English language for special language. And in 1880s, many researches of EST sprang up in England and other western countries, and it had a deep influence on the whole world. This style was used in many aspects, such as scientific papers, academic thesis, research papers,

experimental reports, and the description and explanation on natural phenomena and others. This paper explains the stylistic features of scientific English and its corresponding translation strategies from two aspects: language description, contextual level.

Scientific English is a style of writing with the development of science and technology. It is characterized with soundness in logic and accuracy in thinking. It is usually formal in style and serious in tone. So it usually hasn't artistic beauty in English language. And trying to achieve clarity in logic and accuracy in meaning, its stylistic features are different from the literacy English and other English styles.

## 3. THE TRANSLATION STRATEGIES IN SCIENTIFIC ENGLISH

### 3.1 At the lexical level

An obvious characteristic of scientific English is writing with many technical words. As its higher formality in the literary style, more professional terms are used. Some technical terms are used to explain some particular concepts in technology area. Therefore stylistic features of Scientific English usually express with lots of technical and semi-technical vocabularies. This written style also express with verb phrasal to express subjective and emotional behavior. And this text express with many verbs on Latin etymology and abbreviations [1].

#### 3.1.1 The usage of technical words

In scientific English, the usage of technical words is an obvious characteristic. Technical words are divided into three classes: technical words, accurate technical term, non technical word. In these technical words, many words come from the ordinary English style. On the contrary, the word's meaning in EST is different from what we understand in daily life. Therefore, these words in EST are full of a scientific character in the language expression. As an example, the word "work" is a job in the general speaking; it means "Power" in physics; it means "Earthwork" in Architecture; it will means "Craft" in engineering industry. In addition, some common words are expressed on different areas to express specific disciplines. And for this reason, specification on the scientific English is different from the other areas.

#### 3.1.2 The usage of long words

Long words are quite frequently expressed on the Scientific English and also suitable for the expression

in an accurate way. To avoid the ambiguity expressions, these words are accordance with the requirements of the scientific English. According to the statistics data, the sentence length of technology thesis writing is about 20 to 30 words, and some long sentence in thesis writing is up to 70 to 80 words.

Eg: ① Although there exists much experimental knowledge in regard to the behavior of bodies which are not in the conditions to which the mathematical theory is applicable, yet it appears that the appropriate extensions of the theory which would be needed in order to incorporate such knowledge within it cannot be made until much fuller experimental knowledge has been obtained [2].

### 3.1.3 The usage of nominal words and the usage of nouns or noun phrases

Nominalization is expressed on the Scientific English owing to its formality of the text and the objective and rigorous in language system. It helps the information combined closely, coherently and logically. Science and technology belonging to a formal and objective subject, some ambiguous terms can't be expressed in the scientific English. Some verbs, adjectives act the grammatical components in other styles, while nominal words are quite frequently used in Scientific English. And nominal words in scientific English are coming from Greek and Latin, so the vocabulary is gravity and formalization.

Eg ①, Non-Scientific English: You can rectify the fault if you insert a wedge.

In Scientific English: Rectification of this fault is achieved by insertion of a wedge.

Eg ②, Non-Scientific English: The contents of the tank are discharged by a pump.

In Scientific English: Discharge of the contents of the tank is affected by a pump.

This kind of word is adding prefixes and suffixes to make up new neologisms, such as mono-monoxide, diatomic, super-super-sonic, under-action.

Nouns or noun phrases are expressed in Modern science and technology to modify center words, such as the engine cylinder, the room temperature, weather forecast station, satellite communication techniques and the others. This kind of "noun+noun" structure is more expressed in economics and contract. Its syntactic function is equivalent to a prepositional phrase, modern participle or past participle, and attributive clause [4].

### 3.2 At syntactical level

Passive voice is quite frequently expressed in the style of science and technology, and rarely used in other articles. The usage of the passive makes the translation more concise, objective and accurate. Scientific English also have declarative sentence to expound the precise and accurate relationship between scientific facts and phenomena. This style of writing also is expressed with a variety of phrases and complex embedding structure to complement and modify the content. Therefore, it is necessary to

spring out a lot of complicated structures and multiple departments.

#### 3.2.1 Frequent usage of passive voice

Linguist investigated one third of all finite verbs expressed in passive voice. In Scientific English, passive voice is not only frequent but also an important device to make the text more objective.

Eg ①: The hole is being drilled, a steel pipe is pushed down to prevent the sides from falling in.

Eg ②: For separating iron from the impurities the iron ore must be melted.

In non-scientific English style, the phrases are expressed the behavior of executives; But in scientific English style, it is quite frequently expressed on a method and reason [5].

#### 3.2.2 Frequent usage of declarative sentence

Coherence in logic, clarity and fluency in expression are the typical characters in the scientific English. Therefore, the declarative sentence plays an important role. This writing style also could not express the author's opinions for scientific English trying to avoid the translator's subjective opinions and evaluations. The action could be anybody in many cases, thus, should express the objective phenomena and the information itself.

### 3.3 At Contextual level

The elements of a communicative situation of the context are divided into the verbal and nonverbal context. That is to say, the context includes the given context and the social context involving the speaker and hearer's knowledge and attitude. We should consider the following aspects in the functional stylistics of Specific English.

#### 3.3.1 Field of discourse

Field of discourse has a great influence on the vocabulary and sentence patterns in Specific English. Further studies have discovered two aspects embraced in "field of discourse". One is the subject matter; the other is the nature of activity. These two factors have a great impact on stylistic features.

Any mistakes shouldn't appear on the Scientific English. The scientific information is objective. It is no doubt that the nature of the scientific activity is objectivity, which plays a critical part on grammar and vocabulary. It is distinctive from other types of writing. The technical words and the passive voice are frequently used in such passages, which rightly conform to the objectivity of the Scientific English. For example, aluminum unknown to all of us till the nineteenth century, because nowhere in nature is it found free, owing to its always being combined with others elements, most commonly with oxygen, for which it has strong affinity.

#### 3.3.2 Tenor of discourse

Tenor of discourse refers to the reflections of the participants in a discourse. It is chiefly concerning the formality of the language. The scientific and technical professionals and the experts in this filed play prominent role in the technical activities.

Scientific English is a convenient media to convey the latest scientific information and exchange the scientific achievements. Therefore, the declarative sentences and the present tense are frequently expressed in the scientific English. The participants, in the scientific filed, couldn't express their own subjective perspectives, and also couldn't convey the scientific information to the public. On the contrary, the literary English express the author's own subjective opinions and evaluations.

### 3.3.3 Mode of discourse

Mode of discourse "refers to the medium or mode of the language activity, and it is this that determines or rather correlates with, the role played by the language activity in the situation". Language style, in a more explicit way, varies with the communicative channels. The two important parties in the communicative process convey their information through the visual medium. This communication may be limited by the communicative channels. So the expression on long and complex sentences and the declarative sentences indicate the clarity and the accuracy to avert the words ambiguity.

### 4.SUMMARY

Scientific English has its own unique stylistic features, and the translation adopt its translation strategies to ensure the accuracy of the content and the flexibility of the pattern. At the same time, the

translator should have a professional knowledge and translation of the scientific articles. This paper is divided into three aspects: lexical level; syntactical level; contextual level. And in the scientific English, exchange and communication of the scientific information is our purpose of translation. So the Scientific English, as an informative style, is characterized with the accuracy and logic in the language and structure. Through master its stylistic features, we could make an effective achievement on the scientific English translation.

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# Application of Hyaluronic Acid in Delivery System of Targeted Anti-tumor Drugs

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**Abstract:** Hyaluronic Acid (HA), as a kind of high molecular compound, has the unique performance of targeted anticancer drugs and plays an important role in the delivery system of targeted antitumor drugs. In the environment where tumor diseases seriously threaten people's quality of life, it is important to do a good job in the application research of HA in the delivery system of targeted anti-tumor drugs to clarify the means of its role and lay a solid foundation for further mining the application value of HA.

**Keywords:** HA; Targeted anti-tumor drugs; Delivery system; Application

## INTRODUCTION

Hyaluronic acid (HA) is a linear macromolecular glycosaminoglycan, which is mainly distributed in synovial fluid and intracellular matrix of human and other vertebrates. And it is also distributed in streptococcus strains. Under normal circumstances, HA exists in the form of polymer. When tumor bacteria invade, HA will become fragmented low molecule [1]. Viscoelasticity and rheology are the main physiological properties of HA, and it is also an important basis for its application as biomaterials in the medical field. The representative is the application in the delivery system of targeted anti-tumor drugs. This paper discusses the relevant literature at home and abroad in recent years and summarizes its application status [2].

### 1. TARGETED DELIVERY BY COMBINING HA AND DRUGS

HA has the ability to directly connect with anti-tumor drugs. As an important receptor in the expression of tumor cells, CD44 has good binding performance with HA. Therefore, HA combined with anti-tumor drugs can directly bring anti-tumor drugs to tumor cells, so as to promote anti-tumor drugs to play a good role. Foreign scholars have selected the combination of sodium butyrate and HA to evaluate the effect of sodium butyrate after combination. It is found that the anti-tumor cell proliferation activity of sodium butyrate is not affected, and the anti-tumor effect of HA combined with targeted delivery is more significant than that of sodium butyrate alone. Akima also studied the effect of the combination of HA and anti-tumor drugs, and formed HA-mitomycin C complex and HA-acid epirubicin complex. In the study, <sup>14</sup>C was used to label HA. The results showed

that the anti-tumor drugs combined with HA were quickly delivered to the lesion area, and it played a good role in inhibiting the proliferation of tumor cells [3].

### 2. SELF-ASSEMBLED NANO DRUG DELIVERY SYSTEM BASED ON HA

#### 2.1 Self-assembled nano-delivery system with the connection of HA and drugs

There are many sites on HA, which can be modified by many macromolecules. The resulting HA conjugate is usually amphiphilic, so it can self-assemble to form a nano-drug delivery system and play a role in cancer treatment. Due to their biocompatibility and receptor binding properties, HA-NP has been extensively studied for biomedical and pharmaceutical applications. Recently, foreign scholar Jun et al. discovered in research that a self-assembled HA nanoparticle that does not contain any drugs has a therapeutic effect on adipose tissue inflammation and insulin resistance. Cho et al. prepared self-assembled nanoparticles based on HA-ceramide (HA-CE) for intravenous docetaxel (DCT) delivery. They first reacted HA with tetra-n-butylammonium hydroxide (TBA) to synthesize activated HA-TBA, and then conjugated chloromethyl benzoyl chloride used as a linker with ceramide through esterification, and finally HA-CE was formed through ether linkage [4]. Then HA-CE, Pluronic85 and DCT were self-assembled into nanoparticles. Pluronic85 can overcome MDR and stabilize the micelle structure. The MDR overcoming effect of P85 can be explained by the inhibition of intracellular ATP consumption and drug efflux protein ATPase activity.

#### 2.2 Self-assembled nano delivery system with pegylated HA

Polyethylene glycol (PEG) chains are introduced into some HA conjugates through amide bonds, which can effectively reduce liver uptake and increase blood circulation time, so that nanoparticles (NPs) can selectively accumulate to tumor sites. Foreign scholar Ki et al. chose to couple hydrophobic 5 $\beta$ -cholesteric acid to the HA backbone via carbodiimide to synthesize amphiphilic hyaluronic acid conjugates. And the hyaluronic acid conjugate then self-assembles to obtain nanoparticles. The obtained nanoparticles are labeled with the dye Cy5.5 for in vitro studies, which proves that SCC7 cancer cells

overexpressing CD44 can effectively absorb NPs. In vivo studies, most Cy5.5-labeled HA-NPs are present in tumors and liver sites. Further studies have shown that HA-NPs accumulate passively through the EPR effect, actively target through the strong receptor binding affinity of HA and CD44, with high specificity, and can selectively target tumor tissues [5].

2.3 The combination of HA with nanoparticles through electrostatic action

Lee et al. directly conjugated the highly hydrophobic paclitaxel with HA without using functional groups in HA and any ionic surfactants, salts and sealers. They completed the self-assembly of hyaluronic acid paclitaxel conjugate by forming HA / PEG nanocomposites to form nano-sized spherical micelles in aqueous solution. It was characterized by dynamic light scattering (DLS), atomic force microscopy (AFM) and transmission electron microscopy (TEM). In vitro experiments, HCT-116 and MCF-7 cancer cell lines demonstrated that hyaluronic acid paclitaxel conjugate micelles showed greater cytotoxicity to hyaluronic acid recognizable CD44 overexpressing cells than conventional paclitaxel preparations. The synthesis process is to first dissolve hyaluronic acid in anhydrous DMSO with dimethoxy-PEG (dmPEG) to form a nano-scale complex, then to use DCC/DMAP as a coupling agent, the hydroxyl group of paclitaxel and the carboxyl group of hyaluronic acid are directly conjugated in a single organic phase to obtain a hyaluronic acid-paclitaxel conjugate with an acid cleavable ester bond. Among them, dmPEG is used to replace dihydroxy-PEG in DMSO to dissolve HA to avoid side reactions between hydroxy-terminated PEG and HA during hyaluronic acid-paclitaxel conjugation.

### 3. CONCLUSION

In conclusion, the application of HA in the delivery

system of targeted anti-tumor drugs plays a good role. It can carry anti-tumor drugs to target CD44 receptors, which is conducive to the inhibitory effect of anti-tumor drugs acting directly on tumor tissues, avoiding the inhibitory effect of anti-tumor drugs on normal tissues, and reducing adverse reactions during chemotherapy. And it is also of great significance to enhance the therapeutic effect of tumor diseases. From the perspective of the mechanism of HA in targeted anti-tumor drug delivery, there are still great application prospects, which is worthy of in-depth research, so as to promote its popularization and promote the medical research progress of people's anti-tumor diseases.

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# Change Trend and Law of Chinese Residents' Consumption Behavior under New Development Pattern Context

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**Abstract:** Nowadays, the world economy is experiencing a big change in a hundred years. In the face of complex economic situation at home and abroad, China has put forward "Accelerate the establishment of New Development Pattern for the Mutual Promotion of Domestic and International dual circulation". Based on dual circulation background, this paper found that the factors that currently significantly affect Chinese consumption, mainly consist of household disposable income, taxes, and investments in three industries. In addition, the impact of innovation is increasingly important in recent years. Based on these factors, this paper have proposed some policy to provide some references to enhance the quality of residents' consumption and life in my country.

**Keywords:** dual circulation, residents' consumption, trend

## 1. INTRODUCTION

The 19th National Plenary Session of the 19th Central Committee held in October 2020 adopted the the country to accelerate the establishment of a "dual circulation" development pattern in which domestic economic cycle plays a leading role while international economic cycle remains its extension and supplement. This is not only for the "14th Five-Year Plan", which is a strategic deployment in Chinese economic development. It will have important and far-reaching impact for Chinese realization of "strong trading countries", "strong manufacturing country" and economic high-quality growth. The "dual circulation" development pattern was put forward by the Party Central Committee based on the development and problems of Chinese economic situation. It is another large theoretical result of Xi Jinping's socialist economic thinking in the new era, and also has significant practical significance.

Residents' consumption is the foundation of domestic demand. It is a key link for the value realization of social product products. It maintains the progress of the production and reproduction of social products [1]. In recent years, residents' consumption have developed rapidly. According to the "China Statistical Yearbook" released by the National Bureau of Statistics, the total retail sales of Chinese social

consumer goods reached RMB 40,08172 billion, only 156.998 billion yuan in 2010, an increase of approximately 2.6 times in these ten years. During the "14th Five-Year Plan" period, Chinese economy will move toward high quality development. Therefore, we need to accurately grasp the new characteristics, new changes, new trends and master the key factors of the development of residents' consumption during the "14th Five-Year Plan" period, so as to enhance the fundamental role of economic development, which has realistic meaning.

## 2. THE CHANGES IN THE CONSUMPTION OF RESIDENTS IN CHINESE ON THE BACKGROUND OF THE NEW DEVELOPMENT PATTERN

### 2.1 Chinese residents' consumption status

The trend and rules of Chinese residents' consumption behavior are always the concerns of the whole society. In 2019, Chinese per capita GDP exceeded 10,000 US dollars, of which consumption was the most important driving force of economic growth and has become a key factor in economic sustainable development and important pillars. Since the reform and opening-up, the per capita disposable income of the national residents has increased continually, reaching 30,000 yuan in 2019. At the same time, Chinese resident consumption structure is continuously upgraded. First, the Engel coefficient decreased by 63.9% in 1978 to 28.2% in 2019. According to the United Nations FAO's definition, the Engel coefficient less than 30% indicates that the country's residents are rich. This not only shows that Chinese national food and clothing have been resolved, but also has a quality leap in the living standards; the second is that the per capita consumption expenditure of the residents is significantly increased, which also reflects Chinese resident consumption has improved markedly.

### 2.2 Change trends on Chinese residents' consumption in the context of new development patterns

#### 2.2.1 Consumers preference turn to knowledge-intensive and technology-intensive products

The core of the new development pattern is to build a new pattern of domestic circulation. China is a big country with 14 billion people, so it has a large market scale and domestic demand potential. At the

same time, with the improvement of per capita disposable income in China in recent years, the demand for some of the necessities such as eating is close to saturation, and some high-tech products will significantly increase people's utility, so people's demand on technology-intensive and knowledge-intensive products demand is increasing. In the Fifth Plenary Session of the 18th CPC Central Committee, innovation became the first strategy of the five major development philosophy. In 2019, Chinese R&D staff reached 4.81 million, R&D fundamental expenditure of 22,14.36 billion yuan, accounting for 2.23% of GDP, while the number of patent applications and effective inventive patents have a larger growth in some key domain. The core technology field has also achieved huge breakthroughs. It can be seen that Chinese independent innovation capacity is significantly improved. In this context, my country's huge consumption potential will be constantly excavated, and the consumption structure of the residents will continue to upgrade.

2.2.2 Online consumption will become the main way of consumption

With the arrival of the 5G era, the development of Internet technology is constantly mature. In order to meet the need of production and life, the intelligent terminal is the carrier, the mobile Internet is a channel, the big data and cloud computing is the background,

emerging information consumption will continue to develop and upgrade optimization[2]. In recent years, online shopping has developed rapidly, and online shopping methods are no longer just belong to the young, but have been infiltrated into the lives of the nationals. During the "14th Five-Year Plan", 5G will broaden the development of commercial sectors, accelerate the popularization of consumption, new model, new scenarios, improve the "Internet +" consumer ecosystem, promote education, medical , health, pension and other service consumption convergence development, cultivate new consumption and upgrade consumption.

3. DEMANDS ON THE TERTIARY INDUSTRY ARE INCREASING

Since the reform and opening up, my country has achieved significant achievements in both manufacturing and agriculture. However, Chinese service industry started late, so Chinese current service trade is in a sustained deficit state. With the in-depth development of the knowledge economy, the focus of development around the world has gradually turned from cargo trade to service trade, and service trade has gradually become one of the important factors of a national overall impact. In recent years, Chinese service consumption has been continuously improved, and consumption behavior has gradually transformed from real-type to service-type.

Table1 Chinese consumption data

year	Per capita disposable income	Income online shopping users (10,000 people)	Service consumption accounts for total consumption ratios (%)
2013	18310.8	30189	39.7
2014	20167.1	36142	40.3
2015	21966.2	41325	41.1
2016	23821	46670	41.8
2017	25973.8	53332	42.6
2018	28228	61011	44.2
2019	30732.8	63882	45.9

Source: "China Statistical Yearbook", "China's Internet Development Statistics Statistics"

3. EMPIRICAL STUDY

3.1 Measurement model setting

The software used herein is Eviews9.0, according to the analysis of the above, the per capita disposable income, three industries of my country, and taxes as interpretation variables. Thus, this section first uses the revenue as an interpretation variable, then gradually add other interpretation variables, and summarizes the results.

$$\text{consumption} = \alpha \text{income} + \beta \text{investment} + \gamma \text{tax} + \varepsilon_4$$

3.2 Data source

This article selected 2005-2019 timing data. Among

them, the per capita consumption, disposable income, and the investment of the three industries came from the "China Statistical Yearbook" issued by the National Bureau of Statistics. The number of patent applications is from the "China Patent Survey Data Report".

This article selected 2005-2019 timing data. Among them, the per capita consumption, disposable income, and the investment of the three industries came from the "China Statistical Yearbook" issued by the National Bureau of Statistics. The number of patent applications is from the "China Patent Survey Data Report".

3.3 Analysis of Empirical results

Table 2 Data analysis

	(1)	(2)	(3)	(4)
C	379.8350 (3.862588)	538.0933 (2.229142)	636.6770 (6.354323)	531.0587 (2.868232)
income	0.692284 (131.5761)	0.049829 (12.99094)	0.741375 (24.67988)	0.774828 (13.42917)
investment		1.15E-11 (1.620050)	2.68E-11 (3.616647)	-0.000149 (-0.685576)
tax			-0.021737 (-2.974443)	2.81E-11 (3.589800)
innovation				-0.023782 (-2.949625)
Adjusted R-squared	0.999192	0.999233	0.999571	0.999549
F-statistic	17312.27	6081.117	10864.25	7755.718

Note: T statistic values corresponding to variables in parentheses

#### 4.CONCLUSIONS AND POLICY RECOMMENDATIONS

At present, China has more than 1.4 billion people, 400 million secondary income groups and the total demand close to 1 trillion, and is the fastest growing market in the world, so it is necessary to develop huge potential to use the good domestic market. Therefore, this paper proposed some suggestions in order to provide some references to economic and healthy development and residents' life improvement.

##### 4.1 Improve resident consumption level by improving the per capita disposable income of residents

Resident's income levels directly determine the consumption capacity and consumption level. However, in current, the growth rate of Chinese residents' income is much lower than that of economic growth, especially the proportion of labor remuneration in the initial distribution needs further improvement. Therefore, in order to promote the expansion of consumption, the Government should continue to increase the proportion of the residential department's revenue accounting for national income, which means that the government tax accounts for the proportion of national income. In addition, it should also increase the re-allocation of the residential sector, promote more revenue from high-income groups to low income groups, which will help enhance and expand the growth rate and scale of domestic consumption [3].

##### 4.2 Accelerate the development of internal circulation by industrial upgrading

From the actual situation of current economic development, the industrial upgrading is the basic of

China economic transformation in the driving force. Industrial upgrading includes both strategic emerging industries and breakthroughs in major industrial sectors, including currently industrial-based industry upgrade to higher technical level, higher productivity and higher value.[4]

China is the largest developing country in the world, building a new national innovation system is beneficial to combine large-scale market advantages and new national systems. In addition, the root of improving technological innovation is in the cultivation of innovative talents [5], and some key core technologies in my country are subject to people. Therefore, my country should also develop a group of comprehensive advanced talents who have mastered technological innovation.

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# Literature Review on a Study on the Effects of Production-Oriented Approach on Higher Vocational Students' Spoken English Learning

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**Abstract:** Spoken English is usually considered as the most important embodiment of people's comprehensive understanding of English. Many Chinese English learners display a poor performance in their English production ability. The generation of POA might be very helpful to improve the learners' production skills. This paper reviews spoken English teaching research in general and the situations of the study of spoken English teaching in higher vocational colleges, followed by a detailed introduction of the studies on POA.

**Keywords:** Spoken English; Production-Oriented Approach; higher vocational students

## 1. AN OVERVIEW OF SPOKEN ENGLISH TEACHING RESEARCH

The literature research on spoken English teaching at home and abroad mainly concentrates on the fields of spoken English teaching mode, method, strategy and reform, among which the literature research on spoken English teaching mode relies on the research on foreign language teaching method, and has made certain achievements.

Foreign research on spoken English teaching mainly focuses on countries where English is the mother tongue and countries where English is the second language. The characteristics of these countries are that English is the mother tongue or the second language, and they have inherent advantages in the use of spoken English. Before the 1980s, the traditional teaching method represented by grammatical translation method had been used in English teaching in China. Language is the knowledge that can be explained and imparted is the guiding principle of grammar translation. Since the 1980s, all kinds of new teaching methods have flooded into the west, and these teaching methods gradually began to pay attention to the cultivation of students' comprehensive English application ability. They have made certain achievements in the application of them in China, especially in the research of spoken English teaching mode.

After the 19th century, the direct method believed that learners could learn the sounds of the target language through the direct method, the learner was able to repeat the sound mechanically and eventually, he was able to understand the language by the sound

of his own voice, or to respond by seeing visual images. In the 1950s, the direct method was spread and widely used in many countries such as the United States and its use began to decline gradually in the mid 70s. The audiolingual method was constantly extending and developing. Its emphasis was on using the mother tongue in explicit grammar teaching in class. With its further development, this method begins to emphasize the use of spoken language, using real persons, objects, pictures or slides, setting some common situations in life. It is based on American structuralism and behaviorism, which reached its heyday in the 60s of the last century. The general Response Act (TPR, Total Physical Response), was proposed by James Asher in 1960s. It advocates the connection between language and behavior, by virtue of the action of the body. And the general response method does not give students an opportunity for speaking immediately. Interlanguage Teaching, also known as the communicative teaching method, appears in the twentieth Century. It emphasized that the purpose of language learning is to develop the students' communicative competence and competitive ability to promote the four language skills. The communicative approach takes the function of language as the most critical factor to develop the communicative competence of the students and emphasizes the use of the language.

Wilkins (1968), a British scholar believes that the purpose of foreign language teaching is not only to allow students to express their wishes and ideas with standard pronunciation and grammatical structure but also to allow students to choose different language forms and use language correctly according to different contexts. So we are not only in the course of teaching the students' pronunciation, vocabulary and grammar but also to improve the students spoken and communicative abilities.

In the 1970s, the United States, due to excessive emphasis on scientific education and abstract theory, led to a poor student foundation and a decline in the quality of teaching. In order to solve these problems, the American teachers' committee formulated and promulgated the American English teaching program in October 1982. The outline of English research should involve three aspects: (1) language knowledge itself; (2) the artistic appreciation of literary works

and (3) the use of language, in which language use includes listening, speaking, reading, writing, and so on. The research report points out that about 1/4 of students in the United States lack the ability to communicate with each other, especially in the face of more complex tasks. The report clearly points out the importance of developing students' spoken communicative competence. From the 1960s to the 1980s, with the continuous development of "spoken communication law" and the influence of the work of Noam Chomsky, the teaching of spoken language was further strengthened. The task of learning and language awareness in the United Kingdom and the United States are all later applied to the basic principles of the "spoken communication law".

At present, European countries are advocating to cultivate students' spoken communicative competence. They suggest that teachers and students use the target language to communicate to the maximum extent, restrict the use of mother tongue in class, and emphasize the content of language rather than the language form. Teachers should not interrupt students' speaking because they have made grammatical or lexical errors in the process of communication. Materials should be as close as possible to students' life, interests and experiences.

The teaching of English in China, including the teaching of English majors, has always been lagging behind the level of spoken language teaching and students' speaking ability. After a series of hard studies, many outstanding scholars in our country have jointly constructed the effective mode of training spoken English and effective evaluation system which conforms to the characteristics of English learners in our country.

Wu Xudong (1996, 1997), finally put forward the mode of speaking development of second language in the foreign language classroom environment through a systematic investigation. The theory explains the results of learning from the angle of the learning process. On the basis of external learning factors, Zhang Wenzhong (1999) set up a theoretical model for the development of L2 speaking fluency in a foreign language classroom environment. It reveals the theoretical model of speaking fluency development, and derives the following four rules: (1) Pause serves the idea of what to say and how to say it; (2) The production of the long language flow is based on the verb phrase; (3) Learners have a sense of linguistic correctness, but they do not monitor the language form enough, resulting in more errors; (4) The following problems exist in speaking: the vocabulary use lacks diversity; the pronunciation is not standard and the misuse of vocabulary is also a problem. Wen Qiufang (2007) proposed the combination of interpretation and spoken English by summarizing the problems existing in spoken examination of students, such as the lack of accuracy of language expression, the lack of fluency, the stale

of communicative content, and the lack of depth etc. At the same time, Wen Qiufang (2007) also proposed the output-driven hypothesis, thinking that it has a greater impact on the spoken language ability than the input.

## 2. SITUATIONS OF HIGHER VOCATIONAL COLLEGE SPOKEN ENGLISH TEACHING

Nowadays, most Chinese higher vocational students' receptive knowledge is well beyond the productive abilities. That is, after about ten years of formal instruction, Chinese higher vocational students still lack communicative ability. Most of them have difficulty in speaking English accurately and fluently. The present situation of spoken English teaching in higher vocational colleges is not ideal and there are many problems.

Firstly, higher vocational students do not have strong interests in spoken English class. Thus, their learning interest is not enough and the degree of participation in English classroom activities is relatively low. Ever since middle school, most students are expected to have high grades only in the written tests without spoken tests. They scarcely ever pay attention to the importance of spoken English. In higher vocational college, many students take spoken English simply for the purpose of passing the spoken English test, and only a few of them learn spoken English for interest or the inner desire.

Secondly, students have no adequate access to the authentic material, such as reading material from newspaper or articles, stories from radios, speeches, talk shows and so on. This is a way of language learning in non-pedagogic ways and from natural communication. It can be seen that some Chinese higher vocational students are at a loss when they meet native speakers. There are several reasons that bear responsibility for this phenomenon. The real conversation is somewhat different from the dialogues that they have learned from their textbook. Besides, it is a bit difficult for them to apply what they have learned into real life communication. This problem leads to the lack of interests in spoken English learning indirectly. The class time is so limited that the teachers attach more importance to listening and reading. Students do not have plenty of opportunities to participate in productive activities. Sometimes, students may be asked to finish some tasks in class without providing some proper input material. Thus, students feel frustrated in completing those tasks.

By consulting domestic teaching research literature on spoken English competence, we find that there is little research on spoken English production in China, and most of the articles are speculative research, and there are very few studies on spoken English teaching, many of which are focused on college English teaching, and few on the teaching of spoken English in higher vocational colleges.

An Overview of Production-oriented Approach

(POA)

POA combines the actual teaching situation in China, absorbs the excellent achievements of second language and foreign language teaching, and explores a way out of the dilemma of “time-consuming and inefficient” English teaching. Compared with other teaching methods, POA has the potential advantage of optimizing classroom teaching effect in theory. POA advocates learning the language form through use in meaningful context and emphasizes the combination of form and meaning. It takes the output as the guidance, advocates “the integration of learning and application”, using the output task as the starting point and the end point of teaching, applies what has been learned to promote learning.

After more than 10 years of efforts, POA has become increasingly perfect in theory and practice. POA research team has published a series of papers at home and abroad (Wen Qiufang 2008, 2013, 2014, 2015, 2016, 2017a, 2017b, 2017c), POA has been the theme of several keynote reports in domestic and foreign academic seminars. The new generation of college English compiled according to POA concept has been applied in many colleges and universities in China, and has achieved initial results (Bi Zheng 2017; Chang Xiaoling 2017; Zhang Lingli 2017; Zhang Wenjuan 2017a). It has also exerted a certain influence in foreign academic circles (Cumming & Ellis & Matsuda & Polio 2017).

### 3. STUDIES ON THE THEORETICAL DEVELOPMENT OF POA

Krashen (1985) regards input as the determining condition for the second language acquisition, and the effect of the production is neglected. Swain's (1985) output hypothesis serves as a supplement to the four functions on the supposition that the output is sanctioned. However, she does not explicitly suggest that learning to drive the input in productive stages in different stages. Long (2000) makes an addition that corrective feedback in any specific behavior is useful for learners' acquisition of the correct form, but does not suggest a reaction to the input.

In view of the above theories, Wen Qiufang (2007) put forward the “Output-driven Hypothesis”, aiming at the reform of English professional skills course (Wen Qiufang 2008, 2013) to the intermediate or high level English teaching (Wen Qiufang 2013). The theoretical system of POA has gone through a procedure of continuous development and improvement from 2007 to 2017. The prototype of POA is “Output-driven Hypothesis” (Wen Qiufang 2007), which directs at the curriculum reform of English Majors (Wen Qiufang 2008). In 2013, it was applied to the English teaching in the colleges (Wen Qiufang 2013). In 2014, the “productive-driven Hypothesis” was edited into “Output-driven and Input-enabled Hypothesis” (Wen Qiufang 2014b). And in October of 2014, it was formally named as POA (Wen Qiufang 2014). In this part, relevant

studies on the theoretical development of POA are introduced from these three stages.

POA theory system proposed by professor Wen Qiufang (2014) has been developed for more than 10 years, and now has formed a perfect “localization” theory system of foreign language teaching. In recent years, with the publication of a series of papers by professor Wen Qiufang and the promotion of repeated teaching seminars and workshops at home and abroad, POA has been paid close attention by both domestic and foreign experts and English teachers. Zhang Wenjuan (2016) applied this theory to college English teaching practice and achieved initial results, after several rounds of teaching design and practice, the teaching effects of POA prove it can stimulate the positive emotional experience of students through the task of internal drive; students can get more chances to use the language; the quality of students' language production is greatly improved after the “enabled” link. Zhang Lingli (2017) has carried out the teaching experiment on POA for nearly half a year, obtained certain teaching effect, and tested the overall effectiveness of POA. The study demonstrates that POA can effectively meliorate students listening, writing and spoken ability, it can increase the comprehensive development of students and improve their self-confidence in English learning. POA is deeply loved by students, and can help to fully develop the “potential” of high-quality English resources among students and satisfy the demands of the country for high-end foreign language talents. Qiu Lin (2017) refined the principles and means of facilitating the process of fine design language. Sun Shuguang (2017a) found out a set of principles and methods of teacher-student cooperation evaluation through four rounds of classroom reflective practical research.

However, POA is still in the growing stage. In the process of implementation, it is found that there are many deficiencies in the theory and some areas need to be improved. For example, Yang Lifang (2015) tends to focus on the design of production tasks, while neglecting the communicative nature of the scenes designed when the micro class of “Art and Name” in the unit 2 of the New Generation was filmed through repeated modification of the script. From the teaching practice of Zhang Wenjuan (2016), it can be seen that, the “novice teachers” who implement POA are not familiar with the idea, hypothesis and teaching process of POA, so it takes a long time to be get familiar with it so that they can use it to carry out the teaching more easily. Although some teachers have already put it into practice, some achievements have been made, some problems have been found and corrected, but its development needs more experiments, rational reflection and summary.

By referring to all the literature about POA, I found that few studies focused on how to guide English teaching in higher vocational schools. This paper

studies whether or not it has an effect on the spoken English competence of higher vocational students, in order to further promote POA to higher vocational English teaching. While studies are concentrated on the theory and suggestions, empirical researches on POA are scarce. Besides, the subjects of the experiment are non-English majors, which can reflect the effectiveness of POA comprehensively.

The present study was intended to investigate whether the implementation of POA has a better effect on students' spoken English production and to find out in what aspects and in what ways the implementation of POA affects students' spoken English production. Besides, the study can enlighten non-English majors in classroom so as to improve students' spoken production and promote the quality of English teaching. Last but not least, the study will provide researchers with empirical evidence of how POA affects non-English major students' spoken English production.

According to the foreign research review, we can see that the study of spoken English abroad has experienced a long development process, each stage has its representative teaching method and teaching concept, and it has the epochal nature as well as a certain limitations. With the development of society, people pay more and more attention to the cultivation of oral English ability. As a country where English is the second language, we should learn from the advanced achievements and methods of foreign research and provide theoretical basis for the second language study in our country. At the same time, we should draw on their successful and advanced teaching methods, teaching strategies and concepts from English-speaking countries, it is one of the most important ways to learn a foreign language.

By consulting domestic teaching research literature on oral English output ability, it is found that there is little research on oral English output in China, and most of the literature are speculative research, and there are very few researches on oral English teaching, many of which are focused on college English teaching, and the teaching of oral English in higher vocational colleges is very little, which can not be ignored as an important part of our country education. But beyond all that, I found that there were few researches on how to guide English teaching in higher vocational schools by referring to all the literature about POA. This study attempts to apply this theory to the practice of oral English teaching in higher vocational colleges. This paper studies whether or not it has an effect on the oral English production ability of higher vocational students, in order to further promote POA to higher vocational English teaching.

#### 4. SUMMARY

According to the foreign research review, we can see that the study of spoken English abroad has experienced a long development process, each stage has its representative teaching method and teaching concept, and it has the epochal nature as well as a certain limitations. With the development of society, people pay more and more attention to the cultivation of oral English ability. As a country where English is the second language, we should learn from the advanced achievements and methods of foreign research and provide theoretical basis for the second language study in our country. At the same time, we should draw on their successful and advanced teaching methods, teaching strategies and concepts from English-speaking countries, it is one of the most important ways to learn a foreign language.

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# On the Guidance of Values in Mental Health Education in Colleges and Universities

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**Abstract:** value is the individual's choice tendency, which exists in the individual's or group's cognitive system stably and persistently by the way of belief. The selection and evaluation of values have a great influence on individual mental health. This paper analyzes the current mode of mental health education from the standpoint of values and points out that the effective way to improve the effectiveness of mental health education is to integrate the positive values education into mental health education.

**Keywords:** College students; mental health education; Values

## 1.THE LIMITATIONS IN THE CURRENT MENTAL HEALTH EDUCATION MODE

China's higher education is going through a profound change, which puts forward higher requirements for education and personnel training. Society is beginning to realize the important role of mental health in the growth and development of college students. There are some limitations in the current mental health education mode in colleges and universities. Both the mental health education curricula and the school psychological consultation are commonly carried out only for individuals who have been troubled by existing mental problems for a long time, as a result, school mental health education deviates from the general goal of mental health education, and its actual effect is limited.

(1)The tendency of medicalization of mental health education

In the current mental health education mode, much attention is paid to the diagnosis of mental disorders or physical and mental diseases of visiting students, and the emphasis is placed on treatment. But the ideological education and values guidance are usually ignored, just like clinical medicine.

(2)stressing the post-treatment and neglecting the prevention

In China, schools are partly to blame for students' accidents. Compared with the prevention of psychological crisis, schools in China attach great importance to the existing psychological crisis phenomenon and suicide events, and pay more attention to the corrective mode of mental health education. However, this corrective mode of mental health education is a passive remedial education strategy for the psychological growth of college

students. It is impossible to achieve the overall goal of mental health education and establish a mental health education system.

(3)lack of localization of mental health education

Mental health education in China is mainly based on the advanced theories and methods of western countries. In the classroom teaching, the theory all originates from the foreign research achievement, the localization psychological education pattern has not established. In addition, there are few self-made mental health scale and questionnaire in our country, which do not reflect our country's culture and national conditions. There are great differences between Chinese and Western cultures, and they may not agree with each other in educational practice. [1]

In conclusion, to establish the long-term mechanism of mental health education, we should integrate the education of values and perfect the mode of mental health education.

## 2.THE INFLUENCE OF VALUE GUIDANCE ON MENTAL HEALTH EDUCATION

(1)It is the core of mental health education to mold complete personality through value education.

A psychologically healthy person is bound to have a harmonious and unified personality system, shaping a harmonious and unified personality is the core goal of mental health education. Values are closely related to the shaping of personality. On the one hand, values affect the formation and perfection of personality; on the other hand, the formation and development of personality will also affect the maturity and evolution of values.

Values influence the formation and development of personality. From birth to adulthood, people are deeply influenced by family, school and society all the time. In families, parents' values influence their children's behavior patterns through praise or criticism. In schools, educators systematically inculcate mainstream social values through classrooms, activities, and media, and use discipline and norms to reinforce this educational effect, the thought and behavior of the educatee should be guided to conform to the social norm, the ideal and belief of the social requirements are internalized into the conscious behavior of the educated, thus marking the social values in the formation of individual personality.

(2)It is a useful supplement to mental health

education to establish firm ideal and belief through value education

Mental health education can promote the formation of good psychological quality, improve personality development and maintain mental health, but it can not fundamentally change the cognitive structure of individual personality, especially involving such value factors as ideal, belief and belief. And these factors are to stimulate the individual great enthusiasm for life, perseverance and indomitable spirit of resistance and other excellent psychological quality, can consciously adjust their relationship with the external environment.

The emergence of psychological problems is essentially the conflict and contradiction of individual values. Faith is the supreme ideology governing all other forms of consciousness, the self-discipline of the human mind, and the basic motive force of human moral character such as trust, loyalty and dedication. It contains man's recognition of the meaning of his own existence, his attitude towards life, his value orientation and his moral principles, and reflects man's overall cognition and evaluation of himself and his situation, it is the spiritual activity of human beings to transcend themselves through thought and action. When an individual feels that his life is full or meaningful, he will rely on his own psychological mechanism to adjust to difficulties or crises and achieve a new psychological balance. [2]

(3)Prevention of individual psychological crisis through value education is the key to mental health education

The correct values are the indicator and driving force of People's activities, the behavior of individuals is always carried out under the control of certain values, and due to the conflict of values caused by social transformation, individuals may have distorted cognition and even personality, loss of inherent ideals, beliefs, beliefs, the emergence of "Value vacuum"and "Belief crisis. Once the individual who loses the value coordinate encounters the intense stress event stimulation, does not have the spirit idea or the value system support, very easy to have the sense of helplessness, the fragile feeling.

There are various reasons for individual psychological crisis, but it is due to the defect and split of individual personality, and the formation and perfection of personality, values play an important role in its formation, to set up the coping mechanism of individual psychological crisis through values is in essence to improve and perfect individual personality through the guidance of correct health values, thus fundamentally building a solid and long-term defense against psychological crisis, all this is in the individual psychological crisis before the creation of the systems engineering, in essence, is a preventive measure, can fundamentally reduce and avoid the emergence of psychological crisis.

3.CORRECT GUIDANCE OF VALUES IS AN

EFFECTIVE WAY TO CARRY OUT MENTAL HEALTH EDUCATION

The mental activity of the healthy individual is a complete and unified coordinating body. Once the mental activity does not conform to the law, a series of psychological perplexities or problems may arise. A person's personality in the absence of obvious drastic external factors is not easy to change, everyone has its own long-term formation of stable personality psychology. Unhealthy psychology may be an inevitable developmental problem in human development, which tends to be healthy with individual psychological growth. Individual mental health is a process of change and development, which determines that the education of values can not be accomplished in one go.

(1)Focus on character building

Personality reflects the individual's general mental outlook, is relatively stable, has the unique tendency of psychological characteristics, is the individual's personality, temperament, moral character, values, behavior. An unhealthy personality is often the core element that leads to mental ill-health. It is a feasible and necessary way to mold the complete personality through the guidance of correct values in mental health education. Personality education is a planned and purposeful educational activity to develop and perfect the personality of the educatee. It is an educational concept aiming at improving the overall psychological development of the students and fostering their all-round and harmonious development. In the teaching activity, we should combine the personality education with the regular subject teaching, permeate the value education in the subject teaching, and cultivate the students' good personality quality at the same time of completing the teaching task.

(2)Develop emotional education

With the popularity of the Internet, interpersonal communication virtualization, interpersonal alienation. The youth is in the period of the most intense emotional fluctuations in their lives, college students in the emotional aspects of the overt and volatile characteristics make them prone to emotional instability, causing psychological problems. Emotional education for students, first of all, we should improve the family and school emotional education system. Second, we should respect and trust students. Third, as a big friend to communicate with students, good at listening to the emotional needs of students and opinions.

(3)Reinforce frustration education

Developing various kinds of frustration experience activities can help students experience the psychological feeling of "Failure", guide them to understand the negative emotion correctly and cultivate the ability of resisting frustration. First of all, to train students to set up a correct view of frustration, guide students to view frustration dialectically. How

to overcome setbacks, to a large extent, depends on people's attitude towards setbacks and perseverance in overcoming difficulties. Secondly, creating the frustration situation properly, let the students bear the frustration in the actual situation and overcome the frustration by their own efforts. Thirdly, to create a harmonious educational environment, so that the losers can experience their own life in a harmonious collective, to win the frustration of courage.

#### ACKNOWLEDGEMENT

This paper is supported by the 2020 Education Reform Project of southwest Jiaotong university, "Mental Health Service and specialty construction, building a first-class mental health service and education innovation system". Project number:

20201054.

Sichuan key research base of Philosophy and social sciences project: "Sichuan Mental Health Education Research Center" Project 2018, sponsored by XLJKJY1814B

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# Research on the Application of Interactive Teaching in Primary and Secondary School

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**Abstract:** Under the background of the educational reform in our country, the teaching method has also changed to a great extent, especially for the education in primary and secondary school. As primary and secondary education is the golden period for students to learn, optimizing the teaching model is of significance to improving the teaching quality so as to facilitate the improvement of the overall quality of students. This paper mainly analyzes the current situation of interactive teaching in primary and middle schools in, and explores the corresponding solutions in the light of the actual situation.

**Keywords:** interactive teaching, primary and secondary school, educational reform

## 1. INTRODUCTION

The new curriculum standards put forward a clear idea of teaching. Both students and teachers should be positive players in the interaction process so as to achieve mutual development. Meaningful teaching can promote the absorption of knowledge to students as well as the reflection of teaching experience to teachers. Teachers and students should communicate, understand, enlighten and supplement each other. Therefore, to achieve the goal of educational reform, it is necessary to carry out the interactive teaching mode.

## 2. ANALYSIS OF THE DEFINITION AND CHARACTERISTICS OF INTERACTIVE TEACHING MODEL

### 2.1 Definition of interactive teaching model

In the teaching process of primary and secondary schools, the practical application of interactive teaching can effectively promote the harmonious relationship between students and teachers. Interactive teaching is a process in which teachers communicate with students equally and harmoniously. And interactive influence between teaching and learning will be formed in the dynamic teaching. In this process, the optimization of the interaction in teaching can adjust the teacher-student relationship, thus forming a good and harmonious teacher-student interaction phenomenon. It also can optimize the learning environment so as to promote students' understanding and learning in an orderly manner.

### 2.2 Characteristics of interactive teaching model

The practice of interactive teaching model in primary and middle schools has distinct characteristics. First

of all, it is important to create a situation based on the course content so as to facilitate teaching. This kind of method can stimulate students' interest in learning. Teachers always set problems according to the key information in the teaching materials, then let students think the problems independently to mobilize students' enthusiasm and initiative in learning. It aims to encourage the students to be active and lays the foundation for the interactive teaching.

It is important that in interactive learning, students are in the active and take the initiative. And teacher should mainly work to lead students to learn in interactive teaching model. The goal of interactive teaching is to train and develop the students, help them learn how to master and use the learning methods and strategies correctly.

Finally, equal dialogue help create a good learning atmosphere. Interactive teaching tries to make teachers and students stay in an equal status to achieve students learning initiative. Only when students got the chance to talk with teachers freely and just show themselves, can the enthusiasm and initiative of the students be fully mobilized.

## 3. RESEARCH ON THE TYPES AND PRACTICE OF INTERACTIVE TEACHING MODE IN PRIMARY AND MIDDLE SCHOOLS

### 3.1 Types of interactive teaching models in primary and secondary schools

There are various types of interactive teaching models in primary and secondary schools, among which the interaction between teachers and student groups is a relatively common one. In the actual teaching process, teachers always conduct interaction and exchange ideas with the whole class or a group of students. Students' reactions are easier to show, so that teachers can understand the overall situation of students, and then encourage or organize some learning behavior of students.

Another type of interaction is between teachers and individual student. In this type of teaching, the teacher can give oral praise or criticism accordingly. Individual tutoring, individual communication, enough eye contact between teachers and students are useful methods to conduct. If the teacher can correct students' mistakes in time, students will feel they are concerned and respected. In addition, there are some interactive teaching modes, such as the interaction

between individual students and groups of students, the interaction between groups of students and so on. Various types of interactive teaching mode can enrich the teaching environment and promote students' enthusiasm.

### 3.2 Research on the application of interactive teaching in school

In the implementation of the interactive teaching model in primary and secondary schools, we should follow the corresponding principles below. First of all, teachers should have clear teaching objectives. And teaching design should center on the teaching content and objectives. What's more, in the interactive teaching process, teaching activities should be flexible. And students should be encouraged to explore independently. Moreover, multi-directional communication and cooperation are needed during teaching. For example, teachers can ask students question in the class and ask students to discuss actively. To enable students to think independently, the teacher should observe the discussing situation in detail, pay attention to the collection of mistakes in students' answers, and ask students to discuss again and find out why students make mistakes.

In the practice of the interactive teaching model, it can be divided into several important stages to carry out. First of all, in the stage of theory learning, the teachers should help students have a clear understanding of the course arrangement including the teaching objectives, requirements and theoretical scope of the course teaching. And then teacher are ought to be able to illustrate the advantages of the interactive teaching model, which can help students understand why the course are arranged like this. Then teacher should arrange the project groups and the topics that students are supposed to deal with. Then students can be asked to search for information and have a deep self-study. It is an important stage for students to learn.

Then comes to an important part: communication. Students, as the main body of the learning process should present their own views and opinions. This section is mainly to ask the teacher to change the role from the speaker into the audience. Teachers should collect the problems and opinions that the students present so as to understand the situation of students. Then it comes to the evaluation of the presentation. Teachers should explain and teaching keys and difficulties in the teaching, point out the problems that exist in the presentations, and answer the questions raised by the students in time.

In the interactive teaching mode, the explanation of theory should be combined with actual problems when teachers design the discussion topics and when it comes to discussion stage. For example, in the course of teaching straight line, ray and line segment in math teaching, "Two points can determine a straight line" is a good example. It is a summary of people's long-term practice in the real life. It also

shows that mathematics is the combination of abstract and practical. The teaching goal as well as the teaching difficult point should lie on students understanding on the fact that two points can determine a straight line, which can help the student further understand the straight line, the ray, the line segment. The teaching mode mentioned above helps students realize the expression method of abstract knowledge and the application of geometry language. After a discussion with the students, teachers can draw a picture and explain it at the same time, so that teachers can explain the line first, and then the line segment and the ray by analogy. From the simple to the complex, the teaching is very consistent with the students' cognitive.

### 4.THE EFFECT OF INTERACTIVE TEACHING MODE

With the changes in the society's demand for talents in the future, the creativity has become an extremely important aspect of the standard for measuring ability. Students are not only required to master the existing knowledge, but also to acquire the unknown knowledge based on the known one. Students should gradually learn to use the learned knowledge to creatively solve practical problems and develop the ability of innovation. It is necessary to respect the personality of students and recognize the diversity of students' interests and personalities. This requires that in teaching process, students should not simply accept old knowledge, but discover new problems, and propose new theories and new methods. That means in the teaching process, students should be able to discuss and communicate, so that students can observe and practice. It requires teacher to create more conditions in the teaching process for students to make research on the topics, solve problems, summarize rules, develop the inquiry-based learning habit. Only by fully interacting between teachers and students or among students in the teaching process, can we create an atmosphere of active research, exploration, and continuous innovation, which is conducive to the development of students' intellectual potential, the improvement of comprehensive quality and the cultivation of innovation ability.

### 5.CONCLUSION

In a word, the application of the interactive teaching model in the teaching practice can effectively improve the teaching quality and the overall quality of the students. Through the use of this teaching model, teaching environment will be able to develop further. And it requires teacher to design the course better and create an active atmosphere in the class.

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# Design and Promotion of Oriental Ballet – Huagu Opera Website Platform

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**Abstract:** At present, although the inheritance and protection of Huagu Operan has achieved some results, the current situation of its dissemination and promotion is not optimistic, resulting in the lack of public awareness of Huagu Operan. The intangible cultural heritage is combined with the new media platform to create a characteristic intangible cultural heritage website through the content design of columns such as inheritor teaching, cultural tourism integration and cultural and creative derivatives. The purpose is to quickly spread the Huagu Opera of "Oriental ballet" with the help of the website platform, so as to attract more people to pay attention to and protect this traditional folk art.

**Keywords:** Oriental Ballet; Huagu Opera; Website platform design; Inheritance and promotion

## INTRODUCTION

Huagu Operan is a comprehensive art form with song and dance as the main content spread in the Huaihe River Basin. It is listed in the first batch of national intangible cultural heritage list. It is a cultural treasure of the Chinese nation and has the reputation of "Oriental ballet". At present, although the inheritance and protection of Huagu Operan has achieved some results, due to the outdated media, content and form, the public, especially young people, have insufficient understanding of Huagu Operan culture. Therefore, we must seek a new way to protect the art of Huagu Operan.

### 1. ANALYSIS OF "ORIENTAL BALLET" HUAGU OPERAN WEBSITE PLATFORM

#### 1.1 Survivability analysis of huagudeng website platform

Based on the existing difficulties of the intangible cultural heritage Huagu Operan, the "Oriental ballet" Huagu Operan website platform aims to serve the older generation of intangible cultural heritage inheritors, strengthen publicity and protection by using new forms of communication, and attract more people to participate in the inheritance and protection of intangible cultural heritage. At present, based on the local Huagu Operan website, there is only the official "Huagu Operan art network", and there is no folk or even promotional website. The Huagu Operan network platform provides new ideas and means for the protection and development of intangible cultural heritage, and integrates the tourism industry related to

Huagu Operan art in the market for promotion through the performance and publicity of inheritors, cultural and creative derivatives and the advantages of website platform. It is not only conducive to the dissemination and promotion of culture, but also conducive to increasing the young generation's understanding of traditional culture and promoting the artistic communication and exchange between young people and the older generation. This platform is consistent with the current social needs, social and values, and the direction of social and cultural development. The platform has strong viability and has great operability and practical significance.

#### 1.2 Integrity analysis of huagudeng website platform

The "Oriental ballet" Huagu Operan website platform is complete from planning to implementation, and the platform design is reasonable. The website consists of seven parts: introduction to Huagu Operan, art trends, exchange and performance, cultural and tourism integration, cultural and creative derivatives, lectures by inheritors and short videos. For example, the home page interface design is the essence extracted from these seven parts. Art trends mainly show the information, event reports and information of Huagu Operan related artistic performances; The exchange performance mainly introduces the performance information of Huagu Operan, an intangible culture; Cultural tourism integration introduces the related activity information of the combination of Huagu Operan culture and tourism; The teaching of inheritors mainly introduces the teaching dynamic information of inheritors of Huagu Operan; Huagudeng cultural innovation mainly introduces the introduction and sales of cultural innovation products related to huagudeng; The short video mainly introduces the video materials in the form of Huagu Operan related performances. The whole "Oriental ballet" Huagu Operan website platform is linked from plan to implementation, with close rhythm and progressive content. From publicity - the central link of platform operation - publicity link - promotion and implementation link, the Huagu Operan website platform is set up reasonably and completely.

#### 1.3 Feasibility analysis of Huagu Operan website platform

As a promotional network platform for Huagu Operan, it is mainly to promote the art of Huagu Operan and serve inheritors, tourism and people who

want to learn intangible cultural heritage. On the one hand, through the website platform, we call on people to pay attention to and protect intangible cultural heritage; On the other hand, we provide Huagu Operan performances, inheritors' lectures and cultural and creative products on our platform to facilitate the understanding, understanding and learning of Huagu Operan and promote the in-depth development of intangible cultural heritage protection. This is in line with the spiritual and material needs of people in modern society, and can effectively promote the inheritance of intangible cultural heritage Huagu Opera in contemporary society.

## 2.WEBSITE DESIGN AND CONTENT INTEGRATION OF HUAGU OPERAN

### 2.1 Website design of Huagu Operan

On the Huagu Operan website platform, there is not only a brief introduction to the art form of Huagu Operan, but also a brief introduction to the relevant inheritors, the performance of the inheritors, the current development status and real-time dynamics of Huagu Operan, as well as video consultation of relevant literary and artistic activities, so as to fully and comprehensively display the development of Huagu Operan. In addition, you can also learn the art of Huagu Opera online and buy relevant commemorative cultural and creative products. At the same time, the platform also has Huagu Opera comments for everyone to exchange and learn. The whole website has seven columns: Huagu Operan introduction, art trends, exchange performance, cultural tourism integration, cultural and creative derivatives, inheritor teaching and short video. These columns are also called the navigation bar of the website. It plays a guiding role in the page and can guide users to quickly find the Huagu Operan information they want to browse.

### 2.2 Integrate online and offline performance resources

Integrate the online and offline performance place and time of Huagu Operan art show. You can also buy tickets online for users to choose. In addition, this platform will cooperate with local tourism industries and provide relevant services.

### 2.3 Platform plug-in

At the initial stage of the establishment of the "Oriental ballet" Huagu Operan network platform, we focused on the tourism industry in the market, reduced the Huagu Operan platform and simplified it into plug-ins for other mature industries, so as to collect customer data and establish a cooperative mechanism with them. In the era of big data, data cooperation is the key. There are many mature online and offline platforms in the tourism industry. With the influence of these platforms, we can promote the development of Huagu Operan, an intangible cultural heritage.

### 2.4Application of Huagu Opera in cultural and creative souvenirs

As the branch root of traditional culture in Huaihe River Basin, affected by social changes, there are relatively few inheritance forms of Huagu Operan art. The innovative design of cultural and creative products for Huagu Operan art will not only contribute to the inheritance and dissemination of traditional culture, but also improve the influence of Huagu Operan art on traditional culture [1]. However, it is not difficult to find that the cultural treasures left by our ancestors have not yet formed a systematic cultural and creative product system, and the cultural and creative products of Huagu Operan have not formed an exclusive brand image [2]. In view of this phenomenon, according to the characteristic landscape and Huagu Opera art of the Huaihe River Basin, we have designed a group of Huagu Opera cultural and creative products, such as Huagu Opera gongs and drums, Huagu Opera fans, Huagu Opera theme key chains and Huagu Opera theme makeup mirrors, so as to make the Huagu Opera art more attractive. This series of products are simple, practical and easy to carry, and can be used as tourism cultural and creative products with local characteristics.



Picture 1 The view

## 3.Broaden the promotion channels and expand the influence of Huagu Operan

The communication mode and communication thinking of new media have brought opportunities to the Huagu Operan of traditional culture. The high degree of freedom of new media allows users to choose the content they want to see without the constraints of time and place, which can make up for the problem that young groups have little contact with Huagu Operan and are not interested in Huagu

Operan culture. Therefore, in addition to focusing on expanding its communication channels through the website platform, we also use cultural and creative derivatives, short videos and surrounding areas for promotion.

### 3.1 Promote cultural and creative products

With the vigorous development of tourism, people will buy some local characteristic products and souvenirs when traveling. At the same time, all localities are also making efforts to innovate and continuously improve local popularity and competitiveness. This method can also be used in the publicity of Huagu Opera, integrating the characteristic elements of Huagu Opera into the design and making some cultural and creative souvenirs. You can also implant some soft text promotion products, strengthen the description of the artistic and cultural heritage of "Oriental ballet" contained therein, and attach the jump link of the official website of this platform, so as to facilitate users to click and enter to explore the Huagu Operan culture and achieve the purpose of publicizing the Huagu Operan.

### 3.2 Promote with short video

In recent years, due to the rapid development of short video, short video business is also gradually rising. Some Kwai stars, anchors, etc. use the tiktok, fast hands and other short video software to promote, live and bring goods, etc., and have won the support of the majority of netizens, with remarkable results. The development of Huagu Opera can also learn from these methods, and use these short videos to visually present the cultural visual symbols in the Huagu Opera, so that it is loved and sought after by more users, which is beneficial to the protection and inheritance of Chinese Huagu Opera.

### 3.3 Use the surrounding areas for promotion

Celebrities or stars bring their own traffic. Once the video is released, there will be thousands of views and reprints, which can achieve a good publicity effect. Therefore, we can choose celebrities or stars with more consistent image to cooperate, and publicize through mobile terminals, animation

interaction, film and television works, so as to virtually increase the influence of Huagu Opera art.

The Huagu Operan website platform takes excellent cultural resources as the core, the combination of culture and tourism as the core connotation, and the high-quality website service platform as the core means to comprehensively show the artistic charm of the "Oriental ballet" Huagu Operan. For the future development of "Oriental ballet" Huagu Operan art, we still need to combine the trend of the development of the times, change the traditional communication form of Huagu Operan with new technology, and endow Huagu Operan with new content and form with new design techniques, which is not only inheritance and continuation in a deeper sense, but also pioneering inheritance. It can not only stimulate the vitality of Huagu Opera art, but also drive the development of Huagu Opera related industries and promote the sustainable development of China's Huagu Opera.

### ACKNOWLEDGEMENT

Foundation Items: Key Project of Humanities and Social Sciences of Anhui Province (SK2019A0482); Supported by Research Fund for the Major Program of Higher Education of China Supported by Educational Commission of Anhui Province of China(2019jyxm0185); Supported by a grant from the Innovation Program of Higher Education of Anhui Province of China for the Excellent Scholars (2019zyrc052).

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# An Analysis of American Culture from the Movie Forrest Gump

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**Abstract:** English movie Forrest Gump is regarded as a classic one. Describing an intellectual disability's lifetime, this film reflects all aspects of social life of the United States in several decades. Meanwhile, it uses light form to perform serious topic. As an anti-intellectual film, it calls for the return of American traditional values, and shows some mainstream values of the United States including love, innocence and perseverance. Historical events in this film not only show the changes of American society and culture, but also let us recognize the liquidity and expansionary of American culture.

This paper aims to research the culture contained in the movie. It will all-around elaborate the return of culture values, the criticism of values, changes of society and culture, the liquidity and expansionary of American culture.

**Keywords:** anti-intellectual film; traditional cultural values; return of culture values; criticism of values; culture liquidity and expansionary

## 1 INTRODUCTION

In the history, natural connection between the art and the survival of mankind has existed. Art likes the production of consciousness which is made by people on the basis of man's productive practice. In the fields of consciousness, people always put the real value which is unrealistic into the products of consciousness, because it will make art reflect the positive results of human social reality and the power of truth. Therefore, the outstanding works of art, including classic movies, are able to reflect the value orientation that human society generally recognized and accepted. Forrest Gump is such a kind of classical film. In 1995, Forrest Gump received thirteen Oscar nominations, and eventually it won six Oscars, such as best picture, best director, best actor, best adapted screenplay, the best achievement in film editing and the best special effects. In 1998, it was named one of the greatest American movies. It is so charming that even today. Meanwhile, Forrest Gump is a kind of anti-intellectual film, which humorously rethinks the history of the United States and comprehensively shows the native culture of American.

## 2. MOVIE REVIEW

### 2.1 Evaluation to its success

Why this film is so successful? On one hand, Forrest Gump is portrayed in the film as the embodiment of virtue, and re-affirms the old moral and the main

society culture. Gump knows, "You've got to put the past behind you before you can move on. That's what my run was all about". It tells us that a person, no matter how poor the present situation he is in, can get blessing of the fate as long as he insists on running with the constant belief. On the other hand, Forrest Gump is a typical American. He owns the traditional values of America, individual freedom, equality of opportunity, and hard working. The film appears to be the autobiography. What the Forrest Gump says and experiences not only has a high representation, but also is a direct illustration of America history. Meanwhile it deeply exposes the real problems that the United States existed. The film was created in the 1980s when American society's "anti-intellectual" sentiment was strong. At that time, Hollywood launched a number of films which belittle modern civilization and advocate a low IQ and returning to the original film. Such films were called "anti-intellectual" movies by the U.S. media.

### 2.2 Evaluation to the main character

In the film, with the South American accent and impaired intellectual, the "Fool" of Forrest Gump is almost a representative of the time, owning all the virtues, just as honesty, trustworthiness, serious work and courage. In turn, these virtues have become signs of stupid. It is a great irony to the real society.

The image of Forrest Gump subverts the normal image of hero in the world. In contrast with the traditional concept, it has a strong anti-traditional and anti-mainstream concept. Interestingly, a group of people followed Forrest Gump. These people can not find the answer in the trouble of life so that blindly followed Forrest Gump. It can be said that this is a reality of the American society at that time. People have a great disappointment to the reality, finding no power and significance of the life. So they only pin one's hope and fate on the others. This generation is called lost generation in the history.

This generation felt tired of the bourgeois spiritual crisis which the war exposed. This generation losing their traditional values and beliefs. They found that the pursuit of the dream has become old bubbles and "American Dream" is actually non-existence, and even their hard working have been not able to meet subsistence needs.

Forrest Gump is the incarnation of the group who born in the 1950s and 1960s. In their life, 3K Party, Rock, the Vietnam War, Kennedy, and Nixon appeared on the stage one after another. They grow

up in the chaos. Moral reconstruction and publicity of the personality make their life full of variables.

### 2.3 Evaluation to the fate of other characters in film

To face destiny, this film has three kinds of figures representing three attitudes. Forrest's mother represents believer, Captain Dan represents suspicious men, and Jenny represents rebel.

Forrest's mother in bed told Forrest, "It's something we're all destined to do. I didn't know, but I was destined to be your momma. I did the best I could."

Captain Dan at the beginning believed his destiny strongly, but after many things he started to doubt his destiny. In rainstorm, he roared, "Where the hell's this God of yours?" He didn't believe God any longer. His action showed that this kind of men is in a puzzle—Does the destiny exist on earth?

Jenny, as a rebel, has been rebelling her ordinary living all the time. She symbolizes the rising generation. They rebelled this society and the destiny forced by tradition. But this rebel was tired in the end, and she chose death calmly in Forrest's arms. Destiny likes that feather, which has no concrete direction.

### 2.4 Evaluation to the drama

This film represents many important incidents of social political life in these decades from one unique angle. The film modifies the novel with the same name. The film abandoned the absurdity of the original work and revealed that satiric meaning. The director has added a kind of tender feeling to the film. This undoubtedly makes the film suit audience. But it has sacrificed the spirit of the rebel of the original work.

The film advocates the traditional moral concept and Gump is the embodiment of that concept. In order to make film apt to be accepted by the audience, director superbly lay out skill and film application of language, which successfully makes the film much attractive. It did the best in the box-office that year.

## 3. CULTURAL INTERPRETATION OF THE FILM

### 3.1 An anti-intellectual film about a return to traditional cultural values

It is often said that the 1960s was one time filled with "violence", "sex" and "drugs". Lost Generation is a concise summary of this era. Simon Forest ever said in the *Rock and Memory in Politics*, the public Laissez-faire indulgent, person self-indulgent, and extremist lost themselves in the thrill of not being responsible for any consequences. Fritz Derek Jameson also added, "In a period of time in the 1960s, there is almost nothing impossible. The author put Gump, a man of idle brain and disability, into such an unrest era, which is inappropriate to him. What does the author mean? In the 1990s, anti-intellectual sentiment in American society was strong. At that time, Hollywood launched a number of films which belittle modern civilization and advocate a low IQ and returning to the original film. Such films were called "anti-intellectual" movies by U.S. media. *Forrest Gump* is masterpiece of the period.

An idiot whose IQ is only 75 can live better than his peers with the high IQ, have more successful live, and lives more fascinating. To a certain extent, it reflects a trend advocating the return of nature in America after World War II. In the 1980s, American seems to regain the traditional values and traditional virtue which have lost at one time. So *Forrest Gump* is the offspring of American society conservatism trend in the 1980s and 1990s. This movie does not publish anti-tradition and anti-mainstream, but call a return to traditional cultural values.

### 3.2 The value criticism of American culture

As a whole, the film does not support the popular culture in the 1960s and 1970s. The film recalls the social influence of the popular culture while it fully exposes that the popular culture has brought the negative social influence.

There's such a plot in the movie that when *Forrest Gump* was a child, there was a young musician living in his house. This young man found *Forrest Gump* had a disease and walked by twisting crotch. He thought it was special and then went to learn walking by twisting crotch from *Forrest Gump*. Later, it was a surprise to see that the young musician was Elvis Presley, the king of rock and roll. He is the representative of the popular music and opened the popular culture of post world war II. The twisting crotch is the sign action of pop culture. In this section, the content of describing Elvis Presley is to scorn the pop culture. Especially, the movement of twisting crotch was considered as the ungentlemanly action.

In the film, taking the experience of Jenny for example, the author sharply criticized the rebellious culture in 1960s. Because of the misfortune in family, she was eager to escape from home. Due to Jenny's wearing uniforms to photo for pornography magazine *Playboy*, she was expelled from school. From then on, because of being out of school, Jenny began to wander and live her life by striping in the bar. In the movie, Jenny's experience is about the lines of non-mainstream culture, including the country music, sports, sex liberation, anti-war, and hippies. Jenny has repeatedly refused Gump's love and followed the fashion. In the end, she died in *Forrest Gump*'s arms with an incurable disease. In Jenny's life, misfortune of family, the rebelling and returning to home are the clear line of a return of the mainstream Value. In the movie, her life is opposed to Gump's. Gump represents the traditional values while Jenny stands for the pop culture.

In addition, this film spicily taunts the loss of value in the modern society. A fool Gump was running across the United States and became the star of the people, the target to follow and spiritual mentor to others. people learn from him and try to explain his behavior. When *Forrest Gump* stopped running suddenly, a large crowd of people lost their spiritual prop. In understanding the relationship between what Americans believed and how they lived at that time,

it is important to distinguish between idealism and reality. For example, American values such as equality of opportunity and self-reliance are ideals which may not necessarily describe the reality of American life. Equality of opportunity, for example, is an ideal that is not always put into practice. Race and gender may still be factors affecting success, although there are laws designed to promote equality of opportunity for all individuals.

### 3.3 Looking at American social and cultural changes through historical events

The movie *Forrest Gump* is not just a film but a historical drama. With movie talking about hero's life path, it actually shows 30-year history of the United States post-war. A series of famous people at that time, such as Kennedy, Johnson, Nixon, Elvis Presley and John Lennon, acted with Gump, revealing the social and cultural changes of the United States.

Firstly, it is Itasca riot in Alabama. After the World War II, the civil rights movement which developed rapidly at that time is an important event in American history. In the riot of Alabama, director designs Gump into historical pictures to help the black students picking up books on the floor. In 1963, George Wallace, the Alabama governor, stood before registration building of the University of Alabama, and read a declaration which has the symbolic threat in order to prevent two black students. He stated clearly that racial segregation on the Education in Alabama will never give in. Meanwhile, he openly resisted the federal troops which are sent from John Kennedy and resisted that the federal government dismissed him. It caused a riot.

Secondly, it is the assassination to President Kennedy. President Kennedy met the national college football teams in the White House. As part of the team, *Forrest Gump* is also among the people who are in the interview. Later, In 1963 President Kennedy was shot dead. In 1968, April, Martin Luther King got assassination in Memphis. After months, Robert Kennedy who was justice minister and presidential candidate was assassinated in Chicago. And then the booming of the civil-rights movement tends calm. In fact, these phenomenons have the historical background and characteristic of the U.S.... The population of the United States includes a large variety of ethnic groups coming from many races, nationalities, and religions. Since 1776, an enormous amount of racial and ethnic assimilation has taken place in the United States, yet some groups continue to feel a strong sense of separateness from the culture as a whole. Many groups are really bicultural. That is, they consider themselves Americans, but they may also wish to retain the language and sometimes the cultural traditions of their original culture. For example, American Jews are one group who has traditionally retained a strong sense of group identity within the larger culture. Meanwhile, the local blacks have received the discrimination in America.

Thirdly, it is the war of Vietnam. Movie hero Gump was wounded during the Vietnam War, so he was asked to the White House to interview President Johnson. And the president granted him Congressional Medal of Honor. In 1961, the soldiers of America may participate in Vietnam, and interfere the civil war of Vietnam. In 1969, due to heavy casualties and up sweeping of Domestic anti-war sentiment, President Nixon announced to withdraw troops. In 1973, all the troops of the U.S. had Withdraw from Vietnam. Vietnam War is the longest war in the 20th century. From the 1940s to the 1970s, it is about nearly 30 years.

Finally, they are the ping-pong-figured diplomacy and the Watergate event. Because of the terrific technique of table tennis, Gump visited China as a member of the table tennis team. The famous ping-pong diplomacy was born, which is that small balls push the big ball. The small ball means the ping pang ball while the big ball means the new relationship between China and America. In the film, *Forrest Gump's* trip to China finished the cold war between the two big countries. In the movie, hero Gump was met by President Nixon for representing the United States visit China. And he was arranged living in a modern and high-level hotel named Watergate hotel. He unconsciously forced thief who were into the Watergate hotel to be caught in. Eventually it led to the downfall of President Nixon.

### 3.4 American culture liquidity and expansionary

The protagonist, *Forrest Gump*, is running from the beginning to the end. By running, he gains his dignity, friendship, love, honor and wealth. Likewise, what is the meaning of running to the United States? Here, the author thinks running indicates at least two levels of meanings. First, it stands for the American's mobility both geographically and socially. Second, it reflects the territorial expansion of the civilization of capitalism and the greediness in the soul of capitalism.

In American history, Americans keep migrating all the time. For instance, large numbers of immigrants from all over the world stepped onto the territory of the United States. Then, there were so many people treading to the West that "Old American seems to be breaking up and moving westward." Several years later, during the period of industrialization and urbanization, the Americans then started to move toward cities.

During the process of immigration, the Americans not only broke away from the hardship in the aspects of spirit and material, but also boomed the economy in each passing day. Gradually, the United States comes to be ranked the top of countries around the world.

In addition, the American society is of great mobility, which contributed to the American character: dash and daring, readiness to run risks, aggressiveness, and not keen on having a permanent residence but

interested in seeking their dream by moving from place to place. It is believed that they would succeed in the end as long as they were diligent enough, even if they started from scratch.

The American society is constantly in the state of changing. Expansion is the mainstream culture, but also the most typical feature. The idea of expansion mainly originated from the doctrine of unconditional election (the idea that God had decreed who was damned and who was saved before the existence of the world). The Puritans considered their action as the fulfillment of the "divine duty", so savageness could be replaced by civilization, and their unyielding passion towards religion could change the evil world into the Heaven.

The factors mentioned above can be reflected in the movie *Forrest Gump*. The protagonist, Forrest Gump, finally stops running when he has reached his hometown, in order to tap into his own inner world. In reality, however, the United States is on her road of expansion, seeking for the ultimate hegemony.

#### 4 CONCLUSION

In the history of human development, art and human beings are related to each other. Art is the spiritual product of people's daily practice. In the field of human consciousness, people always do everything possible to put the idealized facts and the illusions together, so that art itself can manifest the achievements of human beings and the power of truth.

Thus, in the outstanding works of art, there must be the deep source of life. The movie, *Forrest Gump*, is the best illustration. It touches the edge of love, polity, as well as self-development. In a nutshell, this movie is just like a box of chocolate, everyone can get something special from it, as long as he tries to understand it by heart.

*Forrest Gump* has a great significance for our life and our education structure. It gives us a sample, teaching us what is the perseverance. In our life, we must believe that nothing is impossible to, no matter what has happened. We need to have a dream, but can not live in our dreams.

In this paper, the author has researched the film and has analyzed American society, American culture, American value and other characteristics of American culture, which are contained in the film. It can be benefit for us to know more about *Forrest Gump* and the U.S..

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# Reasons for Misconduct in Scientific Research and Countermeasures

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**Abstract:** in view of the increasingly severe reality of scientific research misconduct, this paper analyzes the discipline from four aspects: scientific researchers' morality, social environment, evaluation system, supervision and punishment mechanism. According to the causes of research misconduct, this paper puts forward four preventive measures and three control countermeasures.

**Keywords:** misconduct in scientific research; definition; Cause of formation; to guard against; government

## 1. DEFINITION OF SCIENTIFIC MISCONDUCT

At present, there is no clear and authoritative definition of scientific research misconduct in the world. Many scholars and institutions at home and abroad give their own definitions from different angles. Jiang Meishi analyzed the research trends of scientific research misconduct abroad, and discussed the evolution law of scientific research misconduct from four stages: gestation stage, germination stage, development stage and maturity stage. Since the public health department of the United States first defined scientific research misconduct in 1989, after 11 years of controversy, it was not until 2000 that the White House Science and technology policy office gave a unified definition: scientific research misconduct refers to forgery, tampering and plagiarism in project planning, performance, review or Research Report e4,51. Forgery refers to fictitious data or results recorded, archived or written into reports; Tampering means skillfully handling raw materials, skillfully operating instruments and equipment, or using research procedures and methods to replace or omit data or results, so that the research cannot be accurately reflected in the archives; Plagiarism refers to the act of taking others' ideas, methods, results or (core) words as their own without giving appropriate thanks or indicating the source. In the rules and procedures for identifying misconduct in scientific research revised by the German Max Planck Society in November 2000, misconduct is divided into four categories: intentional misrepresentation, infringement of others' intellectual property rights, destruction of others' research work, joint forgery and other specific circumstances J. In the item of intentional misrepresentation, it is specially pointed out that fraud in the application for support (such as financial support) belongs to

scientific research misconduct; In the item of joint forgery, it is clearly stated that active participation in the misconduct of others should be punished. Since the 1990s, Chinese scholars and science and technology management institutions have also put forward relevant definitions of scientific research misconduct from multiple angles. From the perspective of University Science and technology managers, Jiang Xinghua summarized five main forms of scientific research misconduct. In February 2007, the Chinese Academy of Sciences stipulated in the opinions of the Chinese Academy of Sciences on strengthening the construction of norms of scientific research behavior that scientific misconduct includes six aspects: first, deliberately making false statements in the academic field; Second, damage the copyright of others; Third, violate professional ethics and misappropriate other people's important academic knowledge, assumptions, theories or research plans; Fourth, scientific misconduct in the publication or publication of research results; Fifth, deliberately interfere with or hinder the research activities of others; Sixth, it violates social morality in the process of scientific research activities[1]. In March 2009, in order to further strengthen the construction of study style in Colleges and universities and punish academic misconduct, the Ministry of Education issued the notice of the Ministry of education on seriously dealing with academic misconduct in Colleges and universities, which defined six kinds of academic misconduct. Qian Zhenhua and others defined misconduct in scientific research as the behavior of scientific researchers in violation of scientific and social norms through forgery, plagiarism and reputation abuse in the process of scientific research and scientific research socialization, as well as the behavior in violation of various social norms in the process of these behaviors being found and handled 'MJ. According to the situation at home and abroad, scientific research misconduct can be uniformly defined as the deliberate violation of the general moral standards of the scientific community in scientific research activities, in which forgery, tampering and plagiarism are the main forms of scientific research misconduct.

## 2 ANALYSIS ON THE CAUSES OF SCIENTIFIC RESEARCH MISCONDUCT

The causes of scientific research misconduct are very complex. According to materialist dialectics, the

development and change of scientific research misconduct is jointly determined by internal and external causes.

**2.1 unsound academic ethics of scientific researchers**  
With the refinement of social division of labor, for researchers, scientific research is no longer a simple hobby, but a career closely related to interests. Scientific research is an arduous and risky exploration activity. Under the control of the thought of eager for quick success and instant benefit, scientific researchers who lack scientific ethics are easy to find shortcuts, take risks and resort to fraud. Some peer review experts can't resist the temptation of interests, or they can't judge fairly and realistically because of their feelings. If the professional ethics awareness of scientific research managers is not strong, it may also contribute to academic misconduct.

**2.2 abnormal social environment and academic atmosphere**

People are social people, and scientific researchers are bound to be affected by their environment. In a materialistic social environment, researchers will inevitably compare with others; In the impetuous academic atmosphere, many researchers can't settle down and sit on the bench. Social morality is declining. Once the researchers who lack strong will and good moral quality are eroded by money worship, they will speculate and participate in academic corruption[2].

**2.3 imperfect scientific research evaluation system**

Due to the short time, China's scientific research evaluation system is not perfect, and there are many defects in the system. First of all, scientific research emphasizes innovation more than other work, but the current assessment indicators are simply quantified. For example, how much work should be completed each year, how many articles should be published and how many awards should be won. Once these results are linked with professional title, treatment and level, they will lead to "forcing good people into prostitution". Secondly, the imperfection of the peer review system also leads to the virtual existence of the appraisal meeting and the review meeting, focusing not on strength but on relationship. Finally, the current system of evaluating works and papers by the level of publishing houses and journals also contributes to the trend of scientific research misconduct. Under the background of publishing system reform, economic interests are particularly important. Individual publishing units do not strictly control. As long as the author is willing to pay, low-level works can be published, which breeds academic corruption to a certain extent.

**2.4 inadequate supervision and punishment mechanism**

At present, the supervision mechanism is not in place in scientific research activities. Scientific research management institutions are not competent for

supervision due to objective reasons, and trade associations lack the function of supervision. Peers who can play a critical role are weak and gradually silent. The role of independent third-party oversight bodies (such as the media) is still being explored. The punishment mechanism is also not in place. Insufficient efforts have been made to deal with the exposed misconduct in scientific research. First, the relevant laws are not perfect. The current laws are either powerless or lack deterrence against scientific misconduct. Secondly, the lack of official punishment institutions has led to the fact that the institutions where researchers work have become investigation institutions and punishment institutions, forming a situation of "Lao Tzu checking his son"[3]. The punishment institutions often protect their weaknesses due to their own face. Finally, on the one hand, the hidden rule of no mention and no investigation leads to the fact that most scientific research misconduct has not been dealt with, on the other hand, the informant persecutes the informant by using his power.

### 3 MEASURES TO PREVENT MISCONDUCT IN SCIENTIFIC RESEARCH

Misconduct in scientific research not only affects the normal development of scientific research activities, but also affects the rational allocation of scientific research resources and inhibits the production of innovative achievements. Misconduct in scientific research will not only affect the reputation of individuals and their units, but also damage the reputation of national scientists. At the same time, misconduct in scientific research challenges academic purity, leads to public prejudice against science, and hinders the development of science and social progress. Misconduct in scientific research is not only deception, but also a crime. We must take effective preventive measures against its causes.

**3.1 strengthen the construction of scientific ethics and improve academic cultivation**

We must strengthen scientific ethics education, for example, offering scientific ethics courses to newly enrolled graduate students. We should cultivate their scientific spirit of being realistic, innovative, free and independent, and put an end to misconduct in scientific research. In their daily work, scientific and technological workers should pay attention to strengthening the study of scientific ethics and improving their own quality.

**3.2 establishing unified academic norms and form a good academic environment**

Facts have proved that scientific research misconduct will only become more and more serious only by personal consciousness, so we must establish and improve academic norms. Norms are between morality and law, and they are mandatory[4]. A national scientific ethics management organization can be established to be responsible for establishing an authoritative academic standard system, engaging

in publicity, supervision and review, and punishing misconduct in scientific research. Academic circles should vigorously carry forward the scientific spirit, and government agencies, industry associations and scientific research institutions should jointly establish a positive, fair and free academic environment, and consciously resist the intrusion of decadent ideas.

### 3.3 strengthening the construction of legal system and improve the scientific research evaluation system

At present, there is no clear legal basis for the treatment of scientific research misconduct in China. The only related copyright law is not only narrow, but also insufficient punishment. We must further strengthen the construction of the legal system so that the benefits obtained by those responsible for scientific research misconduct are far less than the opportunity cost. For example, those who cause serious consequences must also be investigated for criminal responsibility. In addition, we also need to vigorously promote system reform, establish and improve academic management and evaluation system. An open, fair and impartial evaluation system should be established in the links of project application, book publishing and academic awards[5].

### 3.4 giving full play to the role of news media and form three-dimensional public opinion pressure

News media include not only traditional newspapers and television, but also emerging networks. News media can not only play a positive role in publicizing scientific research ethics and academic achievements, but also play a supervisory role in scientific research activities. The editorial departments of newspapers and periodicals should change the situation of their own affairs in the past, strengthen exchanges, make full cooperation and build an alliance against scientific research misconduct. Continuous reporting and wide-ranging reprinting can form public opinion, which will bring strong pressure on those responsible for scientific misconduct and reviewers. This role of the media has been reflected in the filing, examination and handling of many cases. Of course,

we must pay attention to the objectivity and accuracy of the report, and there can be no irresponsible untrue report.

## 4.CONCLUSION

Misconduct in scientific research not only destroys academic rules, corrupts the style of study, pollutes academic circles, damages public interests, but also affects China's international academic reputation. Fundamentally curbing misconduct in scientific research depends on the academic ethics and social responsibility of researchers. Researchers should follow the basic moral principles of pursuing truth, expanding knowledge and promoting the progress of human society, and adhere to the scientific spirit of seeking truth from facts and rigorous scholarship. We should establish and improve effective prevention mechanism, strict supervision mechanism and reasonable punishment mechanism for various possible scientific research misconduct, and the whole society should make joint efforts to crack down on scientific research misconduct and create a free and fair academic environment.

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# Research on technical and Tactical Teaching in College Football Teaching

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**Abstract:** In the teaching of football in colleges and universities, college physical education teachers should formulate appropriate teaching goals, reasonable teaching content, and fully understand the actual situation of the students, so that they can choose corresponding teaching methods and strategies at different stages. By this way, college students can master the basic skills of football and continuously improve their tactical capabilities. This article conducts in-depth discussion and analysis from two aspects of basic teaching and tactical training teaching.

**Keywords:** college football; teaching; skills and tactics

## INTRODUCTION

With the development of the society, our country pays more and more attention to the development of sports. In recent years, physical education teaching has also been continuously reformed. Football, as an important sports project, has a good mass foundation. While helping people to keep fit, it also attracts appreciation and interest. Therefore, it is very popular among contemporary college students. In actual football training and teaching, physical education teachers should rationally use different teaching methods in each stage of training. The teaching should be based on the teaching content, teaching goals, combined with the actual situation of the students, especially the mastery of basic skills and the ability of teamwork and cooperation. According to the students' mastery of the content of the classroom, the arrangement of the teaching courses should be reasonably adjusted.

### 1. COLLEGE FOOTBALL BASIC TECHNOLOGY TEACHING[1]

In the teaching of football, the teaching of basic football skills is particularly important, because only with a solid foundation can there be a superstructure and can it be easier in the teaching of tactical training in the future. At different stages, the focus and related strategies of football technical teaching are also different. Let's analyze them one by one.

#### 1.1 Technical teaching stage

##### (1) Theory teaching

In the basic teaching stage of football, teachers should first give students a general explanation, and then give a detailed explanation of the specific teaching actions, including their names, methods and

functions, and then focus on the key and difficult points of the actions. Detailed analysis, includes the specific force position, angle and direction, strength and so on. After this series of explanations, students have a general understanding of this movement. At this time, the teacher can split the action again, splitting a complete action into several small actions, so as to facilitate students' learning. [2]

##### (2) Practical teaching

After the theoretical explanation of the teaching actions, the teacher should put it into practice and make a standard demonstration for the students themselves. When demonstrating, the teacher must pay attention to the standard of movement with a slow speed, so that the students can observe the details and main points of the movement. In addition, teachers can also use pictures, videos and other materials to show the actions to the students, so that the students can carry out consolidation exercises after class. Next, let the students follow the teacher or the pictures and videos to imitate, and then the teacher will correct their errors, so that the students can learn the basic movements correctly and solidly.

#### 1.2 Technology consolidation stage

##### (1) Basic movement quality

Any superb technique requires repeated practice, and the same is true for football learning. After the students have learned a series of basic movements, the coach must consolidate them and let the students improve the accuracy of the movements through continuous practice, form movement stereotypes, and improve the quality of each basic movement.

##### (2) Increase the difficulty of the action

After the students have mastered each basic action, the teacher should increase the difficulty of the action, let the students increase the speed of the action and complete the combination of more than two different actions, that is, the combined action, and strengthen the continuity between the actions. In addition, teachers can also deliberately create some interference factors, so that students can complete actions well under the conditions of external interference, improve students' anti-interference ability, and prepare them for the future to enter the stadium with many interference factors.

#### 1.3 Technology upgrading stage

##### (1) Improve movement skills

For every action, there are certain skills, students can not just stop at learning. For some key movements

such as ball control, dribbling, passing, shooting, etc., the skills are stronger. Teachers should increase the intensity and intensity of training for these key movements. In the process of training, teachers should promptly correct and guide students' wrong actions, so as to ensure that these actions are standardized, coordinated and coherent.

#### (2) Improve technical application capabilities

Each technology is a long process from learning to application. In addition to allowing students to repeatedly practice in a targeted manner, teachers should also set up different training environments for students' mastery of technical abilities, so as to increase the results of student training. In addition, you can also set up confrontation exercises, so that students really have a sense of tension and actual combat, in this exercise to improve the application ability of various technical movements of football.

## 2. COLLEGE FOOTBALL TACTICS TRAINING AND TEACHING

As a team sports event, the victory of a football game depends not only on the individual ability of each player, but also on the efficient cooperation of the team and reasonable tactical planning. For football tactical training, it can be divided into three parts: offense, defense, and game formation. Through effective teaching, students can cooperate with their teammates scientifically and reasonably according to the different situations of the competition field, and achieve an effective combination of offense and defense, so as to win the game. Below we conduct a detailed analysis of the teaching strategies of different teaching stages.

### 2.1 Theoretical teaching stage

Football tactical training can be roughly divided into three parts: basic tactical cooperation, individual tactical behavior and team tactical cooperation, and the key to each part lies in the word "cooperation". In teaching football, teachers must pay attention to instilling the concept of tactical cooperation in students, so that students can develop correct tactical concepts. In this regard, teachers can also use images, videos and other image materials to demonstrate tactics to students, strengthen students' observation and thinking skills, and enable students to understand and master the detailed connotations of tactics related requirements and objectives, and understand the different football tactics. The unified law between the two cultivates students' awareness of offense and defense.

### 2.2 Coordination practice stage[3]

After theoretically teaching the concept of team cooperation, students should practice cooperation. Specifically, cooperation and contact can be divided into two stages. The first step is to conduct local tactical cooperation training to lay a good foundation for team cooperation, and the second step is to conduct overall team cooperation training. Here we first focus on the training of local tactical

coordination. Teachers can reasonably allocate personnel for cooperative training according to the different situations of students' mastery of various football skills, and improve students' offensive and defensive abilities by simulating different offensive situations, and improve students' ability to respond to emergencies. For example, training the cooperation of the side and center in the offense separately. The main focus is on the transformation and convergence of different tactical coordination methods in the face of different situations to improve students' tacit understanding. In addition, teachers can also set up a "seven-a-side" football game and select different students to play. This way, on the one hand, it can test the students' mastery of football skills and tactics, and on the other hand, it can greatly improve the classroom. The interestingness of the game allows students to increase their enthusiasm for football tactics training in a relaxed state and high enthusiasm.

### 2.3 Team teaching stage[4]

After a period of local tactical training, the cooperation between the students has become much better than before. At this time, the students already have a certain basis for cooperation, and the teacher should carry out the overall team cooperation training for the students. At this stage, focus on the organic combination of training tactical coordination methods and specific offensive and defensive formations to improve the degree of tacit understanding between all members of the team and the ability of tactical coordination. During training, the coach can set up a specific offensive and defensive formation to allow students to train. After the students have mastered a game formation, teachers can change different formations to allow the students to train separately. After training in this way for a period of time, while facing different field formations, the students can quickly switch tactically for the formation. After such planned and continuous training, the tacit understanding between team members and the overall team cooperation ability will be greatly improved.

Conclusion: To sum up, in the teaching of football in colleges and universities, teachers should pay attention to methods and methods, follow certain steps to carry out stage by stage, and gradually form teaching basic football skills and tactics training. The basic technology teaching stage can be divided into technology teaching stage, technology consolidation stage and technology upgrading stage. In the technical teaching stage, teachers should do a good job of theoretical and practical teaching of basic movements. In the technical consolidation stage, teachers should increase the difficulty of the movements once the students can ensure the quality of the basic movements. In the technical upgrading stage, teachers should pay attention to strengthening students' technical application ability and improve their movement skills. The teaching stage of football

tactics training can be divided into theoretical teaching stage, coordination practice stage and team teaching stage. Each stage has different teaching focuses and teaching skills. Teachers should pay attention to the application of different teaching strategies in each stage of football teaching, and constantly enrich teaching methods, so as to conduct football teaching more objectively and comprehensively. The quality of teaching has cultivated outstanding football professionals for the country. [5]

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# Probe into the Future Classroom in China

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**Abstract:** With the continuous development of The Chinese Society, Great changes have taken place both in teachers' methods of teaching and students' methods of learning. However, as the carrier of teaching and learning process, the form of classroom space has not changed much. At present, most of the classroom still uses the blackboard, projector and whiteboard to teach the lessons, but lacks the attention to the individual differences of students and the effective learning. However, in the view of current educational situation in China, how to make use of the advantages of education, technology and space to construct the future classroom that can effectively promote learners' learning, development and reflect the new concept of space design is still lacking of systematic research. This paper will focus on the discussion and analysis of Chinese future classroom, and put forward the corresponding proposal, hoping to be helpful for relevant connectivism learning representative.

**Keywords:** Future Classroom; Intelligent Classroom; Smart; information technology

## INTRODUCTION

At present, we are in the era of globalization and information technology, marked by computer, network communication and other technologies, has entered every aspect of our lives and affected everyone around us. The environment we live in has been an artificial environment infiltrated and transformed by digital technology. What we are facing and living in is more of a space where the virtual and the real blend. Some experts believe that as informatic technology is less and less expensive, more and more informatic technology will become part of our normal life, technology is no longer just be simply as a tool for human to solve problems in education, and will have a far-reaching significance on education field or education process, the reaction, also is bound to promote the full range of education reform. When technology becomes one of the basic conditions for human survival, human's basic mode of production, way of life, communication and thinking is bound to have far-reaching changes.

## 1.BACKGROUND OF THE FUTURE CLASSROOM'S CONSTRUCTION IN CHINA

From the perspective of teaching information's flow, the classroom, as the main place for students to study and teachers to teach, is not only the starting point of teaching information collection, but also the end point of all kinds of teaching information gathering, and the "main front" of education and teaching

innovation and reform. It plays an irreplaceable role in the teaching process. "The Education Informatization 2.0 Action Plan" of the Ministry of Education clearly states that "we should build an intelligent learning support environment and carry out the construction of an intelligent teaching support environment centered on learners"[1]. How to build a networked, digital and intelligent teaching environment, and how to promote and plan the construction of intelligent (future) classrooms has become one of the hot issues concerned by educational technology workers in various schools.

## 2.THE PROBLEMS EXISTING IN THE TRADITIONAL MULTIMEDIA CLASSROOM

In recent years, with the continuous advancement of school education information technology and the development of modern education technology, colleges and universities have basically realized the full coverage of multimedia classrooms. The educational technology based on multimedia classroom has been popularized and applied in schools, and teachers have changed from the traditional mode of "blackboard + chalk" to the current mode of "computer + projector". However, the teaching mode of most teachers is still based on lecturing, which cannot meet the requirements of modern teaching interaction. Research shows that there are many problems in the teaching process of multimedia classroom.

Teachers' habit of relying on blackboard writing cannot be fully realized on multimedia devices. Teachers need to frequently switch between slides and blackboard writing in front of the blackboard and multimedia platform, so it is difficult for multimedia teaching to fully integrate with traditional teaching, which limits the play of teachers' classroom ability and affects the teaching effect. The "discontinuous" presentation of multimedia disconnects the context of the teaching content, leaving students no time to connect and compare knowledge, resulting in the incoherence of students' thinking and affecting their understanding of the learning content. In the process of teaching, rigidly adhere to the content of multimedia courseware, some teachers in the state of "reading PPT".

The traditional multimedia classroom environment is mostly adapted to the lecture-oriented teaching mode, which focuses on the efficient and multi-media presentation of teaching content, and lacks in-depth interactive technical means.

## 3.THE CURRENT SITUATION OF CHINESE CLASSROOMS

As far as the current educational pattern is concerned, the physical classroom is still the main position of teaching and the main field for students to learn. Chinese current actual educational situation is that primary and secondary school students basically spend seven to eight hours in class every day during school. The traditional classroom has always been designed for the purpose of transferring information from teachers to students, and more attention is paid to how teachers can transfer knowledge rather than facilitating students' knowledge exchange and mutual construction. The design of the classroom is boring and monotonous. Therefore, the future classroom, which is designed for students and can meet various forms of knowledge transfer, skill cultivation, emotional communication between teachers and students, and between students and students, and embodies the characteristics of advanced, comfortable, convenient and humanized, has good theoretical and practical significance.

Based on the above analysis of classroom connotation, in order to construct a future classroom oriented to the cultivation of future talents, we must examine and understand the traditional classroom, carry out a comprehensive and systematic reform of the classroom, and seek a kind of classroom full of spirituality. Teaching is alive, and the life of teaching is integrated into the classroom which is constantly generated under the participation of the subject. Therefore, the classroom is not only the space of knowledge construction, but also the field of students' life activities[2].

According to the literature analysis of the research on intelligent classroom at home and abroad, the functions of intelligent classroom mainly include the automation of classroom notes, classroom record, promotion of collaborative learning, integration of electrical equipment control, automation and intelligent distance teaching. Intelligent classrooms can be divided into basic intelligent classrooms, interactive intelligent classrooms and dual-direction video intelligent classrooms according to the types of realized functions[3].

In addition, according to the technical conditions of the realization of intelligent classroom, the current types of intelligent classroom are mainly divided into three types: intelligent classroom based on hardware technology, intelligent classroom based on software technology and software technology integrated intelligent classroom[4].

#### 4.CONCLUSION

In connectivism learning theory: Siemens points out

the idea of connectivism in his exposition: learning is no longer an activity of one person, but a process of connecting nodes and information sources, which expresses a kind of "learning by relationships" and "distributed cognition". Specifically, connectivism is a wholeness of principles explored through theories of chaos, networks, complexity, and self-organization. It thinks that knowledge (learning) is a process that occurs within a nebulous environment of shifting core elements—not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or database). So we can focus our learning on connections in the series of professional knowledge (right connection) that enable us to learn more and more important things than our current state of knowing[5]. The future classroom with new telecommunication technology connect all the branches and can benefit the connectivism learning efficiently.

With the rapid development of science and technology, multimedia technology has a great impact on people's life. In order to meet the increasing task of education and teaching and provide students with more diversified knowledge acquisition channels, the future classroom information construction is an indispensable step, but also the inevitable trend of the development of education.

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# Research on the Experience path through Museum Display Design

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**Abstract:** Generally, museum managers and designers understand the importance of audience experience, but systematic research on experience path is rare. Thus, more research is required. In this paper, existing research on the experience in museum display design is viewed from an interdisciplinary perspective, and an analysis map of the literature was used to clearly demonstrate the implementation path of display design. Finally, the use of vivid specific and abundant media to impart a cognitive experience, initiative and interaction to improve audience behavior experience, interest and humane care to joyful emotion experience are deeply analysed and discussed as paths to audience experience through display design. The research results of the paper may guide future theoretical and practical research.

**Keywords:** Display design; Experience; Museum

## 1. INTRODUCTION

Early display design research focussed on collecting existing research for use in education. Along with social development, displays now plays various social roles and are receiving more participation and attention from the public. When society develops to a certain extent, social focus turns from welfare to happiness (Hassenzahl, Eckoldt, Diefenbach, Laschke, Lenz, & Kim, 2013). As a result, people's evaluation of objects gradually turn from their usefulness and how easy they are to use to their ability to provide an enjoyable experience. Under this social environment, displays must be designed to create better learning, leisure and entertainment experiences to satisfy the wishes and demands of contemporary audiences

The current research focusses on industrial design, service design and human-machine interaction. Although other research subjects are undoubtedly significant, they are not completely applicable to the subject of display design. The exploration of Experience path through display design may not only drive social development but may also satisfy audience demands, which could have certain theoretical and practical significance. In this research, the literature on experience through display design is reviewed from an interdisciplinary perspective, and a mind map of the literature was used to clearly demonstrate the path of display design. A questionnaire survey was used for the investigation and statistical analysis of key elements, and a

technical analysis was conducted to obtain statistical results. The realisation of experience path through display design in practice is discussed based on the features of the design subject.

## 2. LITERATURE REVIEW

### (1) Influencing Audience Experience with Interdisciplinary Display Design

Experience does not have a fixed definition across the fields of philosophy, marketing, cognitive psychology, sociology and management, all of which are highly relevant topics pertaining to experience. Toffler (1996) found that an increase in experience was an inevitable result of material abundance. He also described human experience as the most transient and lasting product (Toffler, 1996). Likewise, Sundbo and Darmer (2008) explained that experience in society, in the past, required production to promote existence and to solve issues at the material level. However, currently, learning and entertainment are required to obtain a meaningful life (Sundbo & Darmer, 2008). The viewpoints of these two scholars show that experience is the result of material abundance. The economist Pine (2016) explained that the homogenisation of products and services in business was a problem. Currently, the largest opportunity to an effective and valuable business strategy or business model is to build experiences (Pine & Gilmore, 2016). An experience is formed when one's psychological, physical, intellectual or spiritual levels are highly stimulated. Every experience is derived from the interaction between built events and the early spiritual and existential states of the experiencer (Pine & Gilmore, 2016). Sutcliffe (2010) described experience as the views and reactions of the results of the products, systems or services used or to be used. He explains that the user's judgment of a product is derived from the effects and utilisation of the product design as well as the quality of the experience. In addition, the user's judgment is mainly influenced by the assigned task, the task background and the rules and representation of the design information (Sutcliffe, 2010). Kim (2015) believed experience to be a subjective and strategic concept, stating that experience is created through interactions between humans and environments. Further, McCarthy and Wright (2004) stated that experience always exists in our world, while the museologist Falk (2016) explained that a museum is established in the audience's mind as expressed through their

satisfaction and memory.

Pursuing happiness is the centre of personal life. Forming audience experience through design is a method to create joyful and meaningful moments. Forming audience experience focusses on creating a story based on behaviours and dialogues with the external world (Hassenzahl et al., 2013). Following this line of thought, Amoah (2016) explained the three basic elements of experience design as follows:

customers' expectations, co-created experience and consumption experience. The customer's experience value is thus defined as the common expectation and interest of the audience (Amoah, 2016). Experience focusses more on the good feelings imparted to users by the designed object( Li, Cheng, & Zhang, 2014). To enable whole-hearted experience and feelings is the main reason for display design in current society (Shi, Ma, & Dong, 2005) (Table 1).

Table 1. Experience concept base on (zhang, 2015)

Scholar	Viewpoint	Subject
Dewey	Experience is not inseparable. Experience is not just related to the situation producing the experience but is instead an endless development process.	Philosophy
Sundb and Darmer	A meaningful life requires learning and entertainment.	Sociology
Toffler	Human experience is the most transient and lasting product.	Sociology
Cheng	Experience is a perceptual and super-perceptual, rational and non-rational mental activity. Experience is often the regression from rationality to perception but is higher than perception and rationality. It is the combination of perception and rationality and is deep, connotative and hazy.	Aesthetics
Wang	Experience is a special feeling. It is the ability to transform and process an object.	Aesthetics
Zhao	Experience, as a product, requires a profound cultural background for support; otherwise, it is limited to provide value to consumers.	Culturology
Dou	Experience is the cultural connotation behind different products and services. It satisfies the spiritual demands of subjects during their interaction with objects.	Culturology
Meng	Experience is a special state caused by external environments. It can adjust human emotion and other behaviours.	Psychology
Falk	Experience is expressed through the audience's satisfaction and memory.	Museology
Pine and Gilmore	Experience is formed when one's psychological, physical, intellectual and spiritual levels are highly stimulated. Every experience is derived from interactions with built events and the early spiritual and existential states of the experienter.	Economics
McCarthy and Wrigh	Experience is a term used to express the feeling of life. It is a very abundant word. The discourse is open, complicated and emits fresh life. It is not only a theory. Experience always exists. We are always in experience, even we try to stand outside of it to describe it.	Design
Hassenzahl et al.,	Experience design is a method used to create joyful and meaningful moments. Experience is a story based on behaviours and dialogues with the external world.	Design
Sutcliffe	Experience is created in the views and reactions of the results of used products, systems or services.	Design
Kim	Experience is a subjective and strategic concept. Experience is created through interactions between humans and environments. Past, present and future experiences are linked, and experiences are continuously being reconstructed and developed. Experience design should consider structural, behavioural and concrete features.	Design

## (2) Mind Mapping as a Tool to Demonstrate and Explore Experience in Display Design

Combined with the above literature, this paper defines the value of a good audience experience through museum display design by its ability to establish a joyful feeling within the scope defined by display design, including the specific restricted space, time and object. Nobody can design an audience experience directly; researchers can only influence audience experience through the external world (i.e., the display space) of the audience. However, audience experience can be realised through display

design during the visit of the audience. With museums, the display space is public and open, so museums and designers can only guide and influence an audience instead of controlling audience experience.

In this study, a mind map, which is a visual presentation tool, was used to better understand the realisation of audience experience through display design. Since experience elements are complicated and multi-dimensional, generalisation and clustering were required.

Audience experience and feelings prompted by

display design occur during a period of processing. A visitor's behaviour in a display space can be defined as the series of reactions they have to a display while considering the time, vigour and cognitive restrictions of the audience and the physical characteristics of the visitor (Guler, 2015). While an exhibition is a non-verbal, sensual experience that evokes multiple senses (Edward, 2014), audience experience is a personal and subjective response in which the audience must interact (and reconstruct their experience) with the products or services in the display space. Audience experience is determined by various channels, including the explanation of the service and the physical environment of the design space. Since the previous experiences of a visitor will influence their future experiences, experience is a dynamic process.

An audience must process and interact with the exhibition environment; as such, it is difficult to define the boundaries of cognitive and emotional experience clearly. O'Brien and Wetzelk (1992)

stated that display design should realise three objectives: drawing visitors, attracting their attention and delivering information. Displays can deliver two types of information: cognitive information, which is related to concepts, knowledge and information, or emotional information, which is related to attitudes, feelings and interests (O'Brien & Wetzelk, 1992). However, Skydsgaard (2016) suggested that contemporary museums are 'cultural participants' that provide audience participation and interaction through physics and dialogue. Thus, experience can be delivered by one of three routes: a) cognitive, which refers to the audience's cognition, understanding and memory of the contents and objects of a display; b) behavioural, which refers to the audience's reaction tendencies, behaviours and degree of participation with the media of a display; or c) emotional, which refers to the audience's satisfaction with the attitudes and feelings communicated by a display.

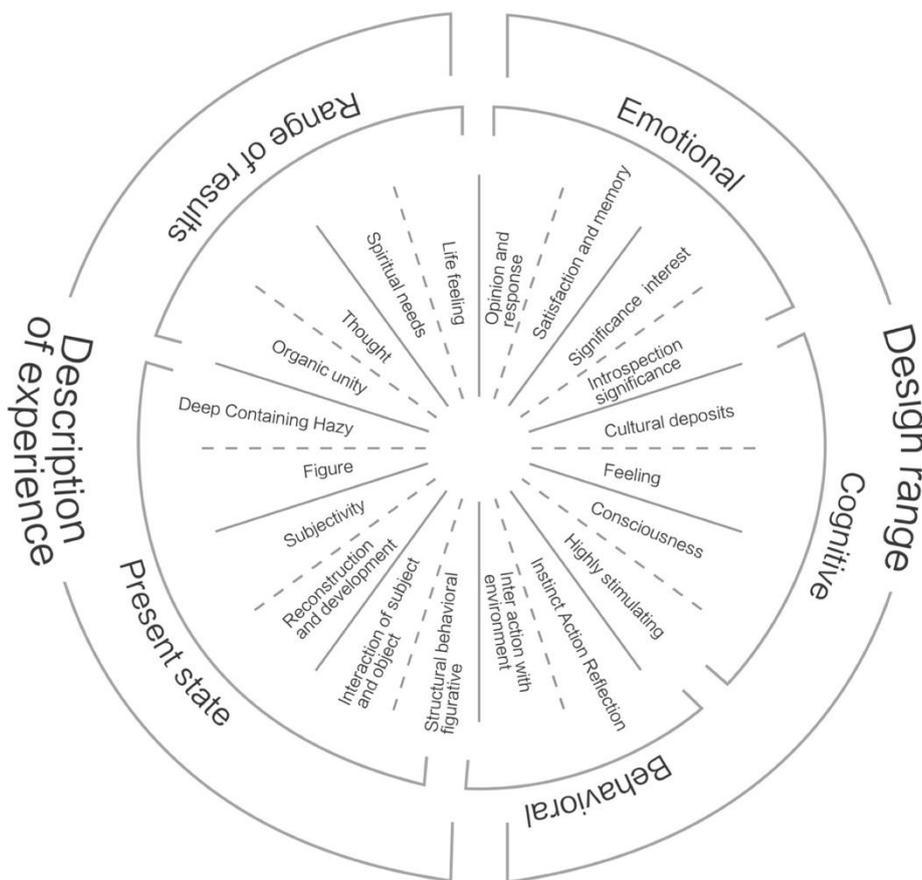


Figure 1 Experience path map

4. DISCUSS THE PATH OF MUSEUM EXPERIENCE

We logically classified and summarised the map according to their effects on cognitive experience,

behavioural experience and emotional experience to determine how value is realised in display design. Classification and summarisation involve phenomenon-based exploration; thus, a feasibility

study is required.

#### (1) Cognitive Experience

As the number of objects perceived in the world is far bigger than the capacity of human perceptive and cognitive processing, humans can only pay attention to some clues while ignoring others selectively (Solso, 2008). However, attention is an effective means to select the same types of information in complex environments (Liang, Lin, Chang, Liu, & Chen, 2017). If attention cannot be focussed when being given a vast amount of information, it is impossible for one to then give information regarding their experience. Therefore, display design should be vivid to attract the attention of audiences. Kim states that vivid specific and abundant media are two viable forms of media that can be used to improve the vividness and attractiveness of a design (Kim, 2015).

#### Vivid Specific

Audience attention is a critical element in the effective communication of information and is an important criterion for the success of a display (Kim & Lee, 2016). In vivid specific, the details are clear and true, which is in contrast to abstract media. In display design, vivid specific refers to specific objects and specific digits. Specific objects in a display can be further divided into specific objects to be displayed, specific environments. Specific objects to be displayed can attract visual attention through zooming, simulation, structural anatomy, partial emphasis and other design techniques, and this visual attention can determine an audience's information selection and follow-up perception and actions (Liang, Lin, Chang, Liu, & Chen, 2017). Specific environments can place objects in a man-made landscape through stories and scenes. With the development of digital imaging technology, information that cannot be displayed by traditional objects can be easily and vividly presented through images, such as in exhibits that are not suitable for on-site display, the internal structure of exhibits, angles that a physical perspective cannot reach and conceptual exhibits. The widespread application of digital display extends the specific display design from a physical concept to a digital one, thus enriching the vividness and attractiveness of a display. As a result, the production, historical process and scenes of specific objects can be relived, which can greatly improve the attractiveness of a display and the vividness of an audience's cognition.

#### (2) Behavioural Experience

In the second media age (after the emergence of the internet), information dissemination is characterised by interaction. Interaction in display design requires the visitor to not be a passive receptor; that is, the audience is allowed to choose which information is displayed and interact with it, and this guides the audience to act. Interaction in display design should conform to the ideas of modern information dissemination, in which new information can be

disseminated through display technology to continuously improve the participation of the design audience (Sun, 2014).

#### Enhancing Initiative through Choice

Design can influence the behaviour of users directly or implicitly; it can intervene, interfere and influence the behaviours of users (Cash & Hartlev, 2017). The user's enthusiasm should first provide the user with a certain initiative that gives them options to choose between. Traditional display design can only provide limited choices to the audience and always treats the audience as a passive receptor. With the development of the new media and display technology, experiences can be changed from passive to interactive; as such, the audience can selectively experience displays at different scopes and depths. Currently, common interactive displays allow the user to use touch controls, inquire and obtain explanations. These display devices and systems provide the audience with simple control options such as on/off, next/back, pause, repeat and volume adjustment. These options allow the user to focus on or learn about what they are interested in and reduce the time they must spend obtaining information they find irrelevant, thus saving valuable time for them during their visit.

#### Interaction in Display Design

Initiative experience focusses on the active control of choices, while interactive experience focusses on feedback and behaviour in a two-way loop. In design, interaction focusses on two-way communication and timeliness as two important principles. Currently, digits are ubiquitous, and people can interact with them at any time in life (Bakker & Niemantsverdriet, 2016). Interaction integrates aesthetics, culture, technology and human science to provide services and high-quality interactive experiences. With the development and application of human-computer interaction technology, display design can provide audiences with interactive experiences. Currently, interactions in display design include interactive projection, games, suspension imaging in the air, motion platforms, virtual flipping and space tunnel and driving simulations. Interactive experiences allow for timely and synchronised feedback and for the audience to delve into the context of the information displayed during an interactive experience. This generates two-way communication, broadens users' vision and improves users' minds and imagination. Interactive experiences also strengthen users' memory of the information disseminated and improve users' ability to acquire information to achieve a sense of accomplishment.

#### (3) Emotional Experience

In general, Emotion dominates decision making, controls the attention and strengthens or downplays memories (van Gorp & Adams, 2014). The emotional experience in display design is the comprehensive feeling of the audience about the visit and is an important factor in evaluating the audience's

experience of a display design.

#### Interest

The elements that attract a visitor to a museum include the desire to experience new things, the chance to learn and the ability to socialise in an interesting, entertaining, exciting and relaxing place (Black, 2011). Interest is an important factor in design. An interesting display design can directly stimulate visitors, allowing the audience to maintain interest during their visit. To be interesting means to be unexpected but reasonable; as such, display design must conform to rules but also exceed them. Interest can be achieved using shapes, colours, lighting, materials, etc. Humour, exaggeration, contrast, metaphors and personalisation can be used to make a design more appealing and thus more interesting. Good designs have strong visual tension, creative content and an interesting appearance; in addition, they communicate smart rhetoric and metaphors and transmit accurate information. How this information is transmitted should be diverse. However, since humans decide the order of the information given, homogeneous structures in display narration are inevitable. Storytelling cannot supplement linear narration alone; the information must be displayed in different contexts to make visitors' emotional experience enjoyable. Narration and the communication of information through storytelling are natural and abundant which can allow for the constant production for new plots.

#### Humane Care

The information revolution based on the convergence of computer technology and communication technology has had a huge impact on cultural values and has transformed and developed society (Zhang, 2017). Museum display design must not only combine technology and art; it must also consider visitors' emotional experience through content and technology.

First, the content must be organised. For specific information to be displayed, professional content that is difficult to understand should be made comprehensible to a general audience without sacrificing professionalism. Then, the content to be displayed should be summarised and refined to alleviate the audience of the burden of excessive reading. However, it is necessary to avoid simple lists. Emphasised tips, highlights and titles should be used to help the audience quickly obtain the main information.

Second, the technical application must be considered. The application of digital technology and new media is characterised by faster updates and higher elimination rates than traditional technology. Currently, many new display technologies are widely used but have high costs (Li & He, 2016). The design should allow for the application of new technology while attending to an audience's emotional experience rather than alienating technology. Human

feelings should be awakened in an audience so that they can perceive the beauty of a display in the midst of information overload.

#### 5.CONCLUSION

Audiences targeted in the experience economy are looking for a colourful experience in their visits to museums. Meeting this demand of the audience is the future direction of display design. This article was conducted to help designers meet this aim. In this paper, experience in display design was summarised. Then, the elements that can be used to achieve a good experience using display design were discussed, concept inductions and route insights were outlined using charts and the content and methods that can interfere and influence display design were defined. Based on the literature and the map, thorough interpretations of cognitive, behavioural and emotional experience were given. Experiences, in museums, are people oriented. Therefore, the design of the museum should not only meet the functional demands of the display but should also actively guide and stimulate the audience's willingness to experience. Research on the experience path of the museum's display design will play an important role in the future and will be critical in aiding museums to gain recognition from audiences and society.

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# The Ways to Deliver Wu Culture in Kindergartens

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**Abstract:** The Chinese civilization has lasted for more than five thousand years and has accumulated a lot of cultural wealth. Traditional cultural education in kindergartens will help children enhance their national self-confidence. Wu Culture is a bright flower in traditional Chinese culture. This article introduces what Wu Culture is and discusses the ways and methods of Wu Culture education in kindergartens.

**Keywords:** Kindergarten; Wu Culture; Education

## 1. INTRODUCTION

Wu Culture is an important part of Chinese culture, including silk culture, water culture, architectural culture, etc. Making full use of the resources of Wu Culture and integrating them into the curriculum of kindergarten can guide the healthy growth of children and promote the comprehensive development of children's body and mind.

Cultural self-confidence is a nation or a country's full affirmation and active practice of its own cultural value, and firm confidence in the vitality of its culture. In the area south of the Yangtze River, the Wu area in the Taihu Lake Basin has a large number of rich folk cultural resources, which are full of content that is of rich educational value for children. Education is a life mechanism of culture. Using education to develop culture and integrating Wu Culture into kindergarten curriculum is an important way to inherit and carry forward Wu Culture.

## 2. THE CONTENTS OF WU CULTURE

Wu Culture is a local culture with a long history and unique charm. Wu Culture is created in the Yangtze River Delta region centered on the Taihu Lake Basin. After thousands of years of historical development and evolution, generations of Chinese people rely on hard work and wisdom. In a broad sense, Wu Culture includes all the fruits of material civilization and spiritual civilization from ancient times to the present. The economic and social development of the Wu cultural area today is relatively advanced in China, which is inseparable from the excellent cultural foundation of the people in this area.

### 2.1 Wu Culture is the culture of water

The Wu Culture area is located in the Taihu Lake Basin on the lower reaches of the Yangtze River. Here, there are beautiful mountains and clear waters, dense river networks, a mild climate and abundant

rainfall. The Wu Culture, which originated in the area south of the Yangtze River, has a breath of fresh water (Wang, 2010). It has the style of soft water and the spirituality of fresh water. The rich material and spiritual achievements of Wu Culture depend on the infiltration and nourishment of water. The silk and rice, fish and shrimp, cities and villages, bridges and boats here all reflect the characteristics of the "water culture" in the Wu Culture. For example, the small bridges and flowing water in Suzhou, garden art, embroidery and sculpture, as well as Suzhou Pingtan and Kunqu Opera, all show the characteristics of water culture. The water culture has cultivated the delicate, soft, and elegant character of the local people, which is in sharp and strong contrast with the rough and colorful character of the northern people.

### 2.2 Wu Culture is the culture of open

The area where Wu Culture is located is flat, without mountain barriers, and water transportation is very convenient. It can reach the inland areas of China to the west, and the sea to the east. It is located in the combined area of the continent and the ocean, and the geographical environment is open. Wu Culture is good at absorbing and developing the strengths of other cultures. For a long period of time in ancient times, it mainly absorbed the culture of China's central and western regions and spread it overseas. Since the mid-Ming Dynasty, it began to absorb more and more overseas cultures and spread it to the central and western regions of China. As the frontier of cultural exchanges, the area where Wu Culture is located combines terrestrial culture and marine culture to form a unique Wu Culture. The Wu Culture's powerful fusion, selection, and absorption capabilities give it vigorous vitality and become a splendid flower in Chinese culture.

### 2.3 Wu Culture is the culture of advocating education

Since China's Wei and Jin dynasties, China has experienced civil wars many times, and a large number of intellectuals have entered the Wu cultural area, bringing rich culture to this area. During the Southern Song Dynasty, China moved its capital to Hangzhou, and a large number of intellectuals moved south. In this way, the Wu cultural area became the cultural center of China. The developed economy, stable life, and beautiful environment in the Wu cultural area have created a culture of advocating education in this area. The Wu Culture area has the

largest number of ZhuangYuan in the country, and Suzhou is known as the "hometown of ZhuangYuan " (Guan, 2018). Especially in the Qing Dynasty, 25 of the 112 ZhuangYuan came from Suzhou. In addition, there are many celebrities in the Wu Culture area. For example, the outstanding painter Gu Kaizhi, the statesman and writer Fan Zhongyan, the famous poet Fan Chengda, the famous writer Feng Menglong, and the geographer Xu Xiake, etc.

### 3. HOW TO APPLY WU CULTURE IN KINDERGARTEN

#### 3.1 Educational activities should be close to children's lives

The interaction and communication between children and teachers is the process of knowledge acquisition and generation, teaching each other, this is the process of life experience, but also the process of emotional communication and collision. The vitalization of kindergarten curriculum resources reflects the humanistic feelings of kindergarten curriculum resources and the interaction between teachers and children (Li, 2011). The chefs in the kindergarten canteen make traditional Suzhou cuisine and local seasonal dishes, which the children like to eat very much. And a variety of exquisite and delicious Su-style dim sum is also very popular with children. Toddlers also order some Suzhou seasonal traditional dishes when they are at home or go to restaurants to eat, and they have more or less heard their parents talk about traditional folk festivals in Suzhou, listen to their friends and their parents sing Suzhou dialect during the TV show. In summary, when choosing the theme of the activity, it must be very suitable for the children's daily life. It is not unfamiliar to the children and is more interesting to them.

#### 3.2 Education must meet the level of children

Children in the age group of 3-6 years pay attention to the guidance of interest, the direct participation and personal experience of the children, and the children's thinking development is intuitive, and gradually develops from the intuitive image thinking to the preliminary abstract logical thinking. Therefore, the intuitive image of the teaching content is required, also can arouse children's interest in cognition and exploration, and can give children space for imagination and thinking development. Knowledge must contain wisdom. The knowledge in education can inspire children with wisdom, aesthetic pleasure, spiritual cultivation, and perfect personality. As a selection of wisdom, curriculum resources most directly contain the content that promotes the development of children's thinking styles. The learning of curriculum resources can make children feel happy, more rational, well-trained, and obtain better growth and development.

#### 3.3 Course content should be extensive

Kindergarten curriculum resources should take into account the fields of health, cognition, art, society,

physical fitness and emotion, and maintain a balance of learning content in the life-long harmonious development of children. In order to enable children to have a certain understanding of local culture from an early age, not to lose their coping ability in the future cultural diversity, and to be able to distinguish the similarities and differences between real life and historical culture well, kindergartens can provide a real environment and make full use of the characteristics and elements of Wu Culture allow children to inherit and carry forward. The selection of Kindergarten Wu Culture curriculum resources is to choose which content in Wu Culture for children to participate in exploration and learning, and what kind of knowledge can be selected is the core issue of the kindergarten curriculum. Choose the most basic knowledge related to daily life, learning interests and experience that children must master at the age of 3-6 years, which not only meets the children's own learning interests and needs, but also lays a foundation for their comprehensive and sustainable development.

The selection of kindergarten curriculum resources should consider the cultural fields of different dimensions, including the aspects of people and the natural environment, seasons, time and space, changes in things and their laws, the way of human existence, and the aspects of human society and culture and their ways of realization. As far as people and nature are concerned, this cultural field mainly involves knowledge of the objective world, including geography, time, seasons, etc., and how people learn and master these objective knowledge. These objective knowledge describe what the world is, how it works, and how it works, when and where we exist, sharing the earth, and some relatively unchanging objective laws and principles, etc., are basic in the selection of curriculum resources, and it can also be said to be a cultural element that has not changed for a long time.

#### 3.4 Basic principles to be followed in education

The inheritance and dissemination of culture is the mission that kindergarten curriculum resources should have. Local culture has a very important influence and significance for preschool children who grow and live in the region. Cultural knowledge gives people the ability to be aware of their desires, goals, motives and needs, as well as ways and methods to realize and satisfy these desires, goals, motives and needs. They follow the following principles: the principle of feasibility : The investment in cultural resources enables children to successfully obtain the cultural capital they can obtain in kindergartens, and provides a breeding ground for the spread and inheritance of local culture. Diversity principle: Wu Culture is a diverse and rich cultural resource, covering a wide range of types, including products, crops, architecture, art, utensils, cuisine, customs, languages, festivals, customs, etc., under the premise

of the principle of feasibility, Teachers can consider integrating the diversified and multi-angle Wu Culture into the kindergarten curriculum in different forms as much as possible. The principle of ontology: children are the subject of learning. According to the geographical attributes of Wu Culture and its local cultural characteristics in Suzhou, we will explore the rich local educational resources and always respect the dominant position of children in learning. Fun principle: In view of children's age characteristics and laws of physical and mental development, learning interests and needs, curiosity, etc., from the perspective of children, choose brightly colored, lively, and interesting ones that meet children's age, interests and needs Suzhou local cultural resources. The principle of life: choose to be close to the lives of children, start with the familiar Wu cultural content that is around the children, can experience and feel in life, guide children to explore independently, and meet the needs of children to practice and participate in the experience.

#### 4. CONCLUSION

Incorporating Wu Culture into the kindergarten curriculum can enable children to better understand their hometown and the culture of their hometown, and germinate a love for their hometown and a love for the motherland. It can help children develop good morals and personalities, can promote the comprehensive and harmonious development of

children's body and mind (Liu, 2016), and can enhance children's cultural awareness and cultural self-confidence.

#### ACKNOWLEDGEMENT

Project for Open project of Research Center of Wu Culture Inheritance and Innovation 2021: Research and development of children's play teaching aids based on Wu culture (SVU2021WWH22).

Funding by Research Center of Wu Culture Inheritance and Innovation.

Funding by Practical Training Project for Young Teachers in Higher Vocational Colleges in Jiangsu Province.

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# Research on the Importance of Modern Design Concepts in the Design of Chinese Ceramics

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**Abstract:** The production of ceramics in China ranks the first place in the world, but in terms of products design, there is still a certain gap between Chinese ceramics and the world's advanced level, and the road to the design of Chinese ceramics still has a long way to go. As a part of modern large-scale industrial production, ceramics need to focus on the use of modern, scientific and advanced design concepts. Nowadays, the importance of modern design concepts in the design of ceramics should be reflected in several aspects such as functional concepts, cultural and aesthetic concepts, humanistic concepts and market concepts, which is what this paper discusses and studies.

**Keywords:** Modern design concept; Design of Chinese ceramics; Importance

## INTRODUCTION

The appearance and invention of ceramics originated in ancient China. The invention of porcelain is still a huge contribution that the Chinese nation has brought to the world today. With the continuous development of modern industry and the continuous impact of modern civilization, Chinese ceramics is facing a stage of development from mass production to quality production. Obviously, the design aesthetics and overall quality of Chinese ceramics are still far behind those of many advanced countries in the West. In the design of ceramics, Chinese designers also need to establish their own unique and advanced design concepts and grasp the national and global market changes and market background, so that the design of ceramics can continue to move forward and catch up with and surpass western countries. This paper analyzes the importance of ceramics design in such four aspects as functional concept, humanistic concept, cultural and aesthetic concept, and market concept.

### 1. FUNCTIONAL CONCEPT

China needs to pay attention to the function of ceramics in the design of ceramics. The demand of modern people is diversified, which puts forward higher requirements for the function of ceramics [1]. At the beginning, traditional Chinese ceramics focused on the function. However, with the change and development of dynasties, ceramics began to have the function of coexistence of practicality and aesthetics, and gradually reduced the pursuit of practicality in the process of artistic pursuit. With the

advent of big data era and the continuous advancement of informatization, people pay more attention to the environment and their own health, as well as the ease of use and fashion of ceramics. However, the functional concept in the design of Chinese modern ceramics still lags behind the requirements of the times to a certain extent and can not well meet the needs of the international market. The function of modern design concept has been paid more and more attention in today's design of Chinese modern ceramics. It can combine the functional concept of Chinese ceramics design, form its own functional principle, pay attention to the unity of aesthetics and practicability, so as to pay attention to the pursuit of artistry and aesthetics and form its own unique ceramic design style.

### 2. HUMANISTIC CONCEPT

There is no doubt that the design of ceramics must be people-oriented and respect human living habits and lifestyles. No matter what stage of development and what era human beings are in, it is necessary to take the humanistic concept as one of the modern design concepts of today's ceramics design. Ceramics is closely related to human daily life, and their design and production must be inseparable from humanized design. Ceramic designers need to implement the spirit of people-orientation and respect principles of economy, vividness and humanity. They should not only pursue surface decoration or patterns, but should consider the long-term and healthy development of the ceramic industry. They should think for the sake of human beings, respect their living habits, emotions and traditional customs, and design and produce more advanced and more humanized ceramics. At the same time, designers need to enhance and improve their affinity to make the design of ceramics more humane, so as to expand the market audience of products, arouse the emotional resonance of a wider range of people, provide consumers and buyers with a more comfortable feeling, and enhance the competitiveness of Chinese ceramics in the global market [2].

### 3. CULTURAL AND AESTHETIC CONCEPT

The essence of man is the pursuit of beauty. In the design of ceramics, it should be integrated and coordinated with the culture, art and aesthetics of a country and a nation to achieve or maintain consistency to the greatest extent. The aesthetics of traditional Chinese ceramic modeling emphasizes the natural charm, and rejects the characteristics of

modeling. The pursuit of emotional natural beauty is actually the pursuit of harmony between man and nature. This is the essence of Chinese ceramic culture aesthetics and the embodiment of ancient Chinese aesthetic ideas. However, ceramics in modern society has latent features that are consistent with the aesthetics of the information society and are in line with the lifestyle of modern people. We should not reject those features. The unity of rationality and sensibility is the foundation of modern design concepts. In the process of human civilization, ceramics is a relatively special cultural form with dual characteristics of material and culture. Ceramics is, first of all, a product that is "created" for real life needs, and it is also artistic creation that seeks aesthetics. The design of ceramics conveys the materialized beauty of technology in a unique way, and also embodies the value orientation of culture in the commodity society. It encourages designers to create new human life styles to improve people's quality of life. The new lifestyle and new quality of life should be enriched by a large number of novel ceramics [3]. The design of ceramics is not only a kind of culture, but also a state of materialization. It is a cultural form with a distinctive national color. Ceramics designers are the creators of this culture. They have to both break away the mystery of culture, and take on the sense of mission and sacredness of culture, and absorb the essence of traditional culture and integrate traditional culture into the design of ceramics, so as to connect traditional cultural concepts with international design concepts and find a cultural positioning that meets the common ideals of mankind.

#### 4. MARKET CONCEPT

From the late 1980s to the early 1990s, the market competition was not fierce, the crisis awareness of enterprises was not strong, and the emphasis on design was not enough. However, in today's ceramics market, fierce market competition has raised higher requirements for the design. The production of Chinese ceramics is extremely large, but it does not mean that Chinese market competitiveness is strong. On the contrary, Chinese ceramics is mainly in the low-end market, and the profits are meager. Although some of Chinese companies are technologically advanced, their products can only linger in the low-end market, and it is difficult for them to enter the high-end market in Europe and America. It mainly because that their design concept is not really

market-oriented. Design is a powerful fulcrum to support the market competitiveness [4]. The market concept requires us to regard the market as a dynamic system, put the market in the overall context of the information age, and design and produce products with market competitiveness. Ceramics needs to be sold on the market, so its design should meet the consumer needs of the domestic and international markets. Ceramics designers must face the world, conduct in-depth market research, broaden their horizons, and develop in multiple ways to create ceramics with the features of the times. Designers must make full use of Chinese traditional craftsmanship, develop products that meet market needs by combining with modern technology, and then it is possible to create a world-famous brand of Chinese ceramics. For the ceramic industry in the future, it will be an era dominated by creativity, design and culture, that is, innovative design will be a breakthrough to drive the overall development of the enterprise, and innovative design will be used to increase the added value of products.

#### 5. CONCLUSION

To sum up, the design of Chinese ceramics is stepping into an era of all-round development with the continuous advancement of internationalization. The design of Chinese ceramics needs to adhere to the modern design concepts, play its role in many aspects such as functional concept, humanistic concept, cultural and aesthetic concept and market concept, so as to provide guiding concept for the development of Chinese ceramic industry, and escort the healthy and long-term development of Chinese ceramic industry.

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# Existing Problems and Countermeasures of Chinese College Students' Consumption under the Background of Mobile Payment

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**Abstract:** The consumption of college students has always been attracting public consideration. According to statistics, the number of college students increases steadily year by year. Meanwhile, mobile payment is a new way of consumption with the development of science and technology recently. Convenience is the main reason for its rapid development. Based on Maslow's demand theory and Veblen's conspicuous consumption theory, this paper discusses the development of mobile payment and its impact on college students' consumption. The research on the lousy consumption behaviours of college students under such background can help and guide college students to establish a correct consumption concept. It is beneficial to improve the related research in this field and has specific reference and guiding significance for the follow-up research. For application, it is helpful to expand the consumer market of college students.

**Keywords:** college students; mobile payment; consumer behaviour

## 1. INTRODUCTION

Mobile payment refers to the use of third-party payment platforms by users for payment and consumption. College students are the easiest to accept new things, and their ability to receive new things is vital. Mobile payment's convenient and fast advantages meet college students' small and multi-frequency consumption needs, and college students quickly seek after it. As the pace of life is getting faster and faster, college students use Alipay, WeChat, UnionPay, and others to improve efficiency. At the end of 2018, CNNIC released data on China's Internet population, which have reached 829 million[1]. The surge highlights the potential of the mobile payment market. Seventy per cent of China's Internet users are teenagers, and 28 per cent of them are between 20 and 29. Young people have become the main force of Internet users, among which college students dominate and the core target of mobile payment.

In recent years, mobile payment has gradually emerged and significantly impacted people's consumption behaviour. Therefore, it has attracted more and more attention from academic circles.

At present, there is no unified definition of mobile

payment in the academic field. The definition in the mobile payment forum (Molepamentromm) is using within the sector: Mobile payment refers to the commercial transaction realized through a mobile communication network by using mobile terminals as the carriers for particular goods or services. Mobile terminals used for mobile payment can be mobile phones, PDA, mobile PCs, etc.[2] With the further popularization of mobile payment and the expansion of college student groups, the impact of mobile payment on college students' consumption is also increasing and bringing new changes.

## 2. THE PROBLEMS OF COLLEGE STUDENTS' CONSUMPTION UNDER THE BACKGROUND OF MOBLIE PAYMENT

### Excessive consumption increased

The consumption model of network e-commerce, "consume first, pay later", has been supported by many young users. Under the influence of the western consumption concept, college students gradually adapt to advance consumption. According to data from Taobao, sales on Singles' Day in 2019 reached 268.4 billion yuan, with almost all of the transactions coming from wireless terminals[3]. This pattern changed the consumption structure of college students and expanded their consumption scale. When the living expenses of college students are exhausted, they can meet some of their needs by overdrawing. These needs are often unnecessary. The popularity of the consumption pattern of "consume first, pay later" among college students, coupled with the emergence of low-threshold credit products, provides low-cost channels for advanced consumption in colleges and universities and stimulates the increase of irrational, excessive consumption behaviours.

### (2)Security risks increased

Users are easy to cause information leakage during mobile payment. When users use the mobile payment for consumption, users may suffer capital losses due to the loopholes of the payment system itself. In addition, if criminals steal the information in communication, the disclosure of users' private information will also lead to users' damage. Because college students lack social experience, they generally lack safety awareness. When they use third-party mobile payment platforms to pay, they are

easily stolen by criminals because of improper operation or easy to expose the two-dimensional code of payment. In addition to its security vulnerabilities, there is no effective supervision mechanism for mobile payment, which is also a part of the payment security risks.

(3) Dependence on mobile phones increases

Shop around and increase somebody phone usage. The development of mobile payment technology guarantees for the optimization of the network shopping, college students can use a mobile phone, a computer can buy products all over the world and can obtain more options, but it also provides a convenient platform for illegal businesses, in the network market, through forge proof fake profit. E-commerce companies have been making false propaganda; whether the product information is accurate and guaranteed quality has become an essential issue in online shopping. If college students want to buy high-quality and inexpensive products on online shopping platforms, they need to screen by comparing product information and checking user comments. However, in shopping around, college students' use of mobile phones increases dramatically, and they may become dependent on them. Its use in the time cost of shopping also increased significantly, affecting its life and study, physical and mental health can not be fully guaranteed, the gain outweighs the loss. Meanwhile the Convenience of online shopping lures college students to indulge in the online world

### 3. COUNTERMEASURES AND SUGGESTIONS ON PROMOTING THE HEALTHY DEVELOPMENT OF COLLEGE STUDENTS' CONSUMPTION UNDER THE BACKGROUND OF MOBILE PAYMENT

(1) College students establish healthy consumption concepts and strengthen self-management

Through an exercise in life and study, college students can improve their self-control ability. Faced with the temptation of low prices, college students should strengthen their management and learn to consume rationally. While shopping around to choose high-quality and inexpensive goods, we should pay attention to the increase of invisible time cost, make reasonable and appropriate use of mobile payment for consumption, and save more time for more meaningful things such as study. In addition, a healthy consumption concept is indispensable. Nowadays, more and more temptations and choices place in front of college students, and it is more and more critical for young people to do proper planning and cultivate good financial management concepts.

Authorities should step up technological research and development to eliminate security loopholes in mobile payments

The security loopholes inherent in the mobile payment system are the main reasons that cause the security risks of college students when they use the mobile payment method for consumption. First of all, a communication security firewall should strengthen. The user information is not guaranteed, and it is easy to be obtained in the process of communication, causing property losses. The mobile payment system should strengthen communication security, protect users' private information and prevent eavesdropping. Secondly, strengthen the password security firewall. Third-party payment platforms often set a six-digit payment password, which is easy to crack. To solve the password security problem, multiple passwords can be set for reinforcement. Therefore, the mobile payment platform has the responsibility to set up some safety tips information, alert users to pay accounts should not be shared with other accounts, do not bind with other software, In the security of user payment simultaneously, improve user satisfaction.

(3) The government increased supervision and support Government regulatory departments should be a nip in the bud and constantly repair the mobile payment regulatory system loopholes to put on bulletproof vests for mobile payment. Strict industry access standards should formulate to prevent criminals from using mobile payment platforms to obtain funds at the source. The laws related to mobile payment are not perfect, and there are many legal loopholes. Illegal merchants use these loopholes to prey on vulnerable consumer groups of college students unscrupulously, but the law does not severely punish them. As for online loans, college students are generally not mature psychologically and quickly fall into the usury trap. If specialized departments can set up particular loans for college students and help students in difficulty, the chances of college students infringe can be significantly reduced, thus reducing transaction risks.

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# International Expression of Domestically Made TV Documentary -Comment on “Behind Salt”

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**Abstract:**The documentary “Behind Salt” tells stories across regions in the world of intimate relationship between human and salt. It reveals the vital importance the salt being to the mankind, focuses on the shared destiny or humanistic care of all humans, and at the same time points out the challenges the salt workers confront in this age of dynamic social transformations. The most innovative part of “Behind Salt” is that it constructs a macro world by tiny salt, exactly imitating our realistic life from a macroscopic viewpoint. A trans-national and trans-general pattern in this work has been created in which multiple living conditions are illuminated with the highlights of the cultural consciousness and cultural confidence of our country.

**Keywords:**documentary; Behind Salt; international expression

## INTRODUCTION

With the external communication and cross-cultural exchange in recent years, a large number of domestically made documentaries, such as the A Bite of China series and the Forbidden City Series, have made great achievements in international communication and built up their reputation in the global market. It has always been an issue that Chinese documentaries strive to explore after going global that how to integrate domestic documentaries with the world in the context of increasing cultural exchanges between different countries or regions, so as to win overseas audiences and markets, and promote exchanges and communication among people from different cultures and backgrounds. The six-episode documentary series of “Behind Salt” broadcast by CCTV record channel has made a beneficial exploration towards it. With salt as its description object, the documentary breaks through the limitations of time and space, goes deep into the main salt farms all over the world, and guides the audience to learn about the life stories of salt. It discusses the significant representation of salt and human survival, social life, historical change, cultural mission under the context of globalization through six different chapter themes, namely, “dependence”, “national destiny”, “survival”, “wealth”, “boundary” and “return”. The audience are expected to, through viewing of the documentary, reconstruct their overall

cognition of this world, and come to realize the general connotation of globalization.

## 1. PEOPLE INDEX: A RECORD OF VARIOUS LIVES BEYOND NATIONAL BOUNDARIES

Over the years, great successes have been made in documentaries on food, such as “A Bite of China”, “Once Upon a Bite” and “The Story of Chuaner”, which mostly detail the cooking methods and delicious tastes of the food, explore the traditional local customs or practice behind the food, and pay special attention to looking into the stories of ordinary people and food. Such works are exactly demonstrations of creators’ humanistic care as they endeavor to show to public the very life attitude of ordinary people. Through a collection of fascinating food stories, the documentaries try to investigate the inextricable relationship between human and food. “Behind Salt” follows this type of narration. Taking “salt” as a narrative clue, it underscores the stories on humans’ close connection with salt. With a broader vision, the lens of creator’s shuttles back and forth geographically above the earth’s surface to locate all kinds of salt fields around the world, record various forms of human life based on the object—salt.

The main creative team went deep into the world-famous “salt” areas across Asia, America, Europe and Africa, stimulating a brand new meaning space between salt and people with their unexceptional trans-boundary salt stories. One story is about Mosa and his son, the most heat-resistant Alphas that live in Danakil Depression in the depths of Ethiopian desert, the place with the highest average annual temperature on Earth. Every year the father and son need to endure high temperatures of more than 50 degrees to go deep into dangerous salt pools and mine salt blocks with extremely primitive knife and axe tools. Salt mining in the desert is a quite adventurous work which proves the rarity of salt in such areas. Ciren Yuzhen, a Naxi woman in Tibet Markam Ancient Salt Field, represents these tribal women in salt fields who labor hard and diligently every day. They take care of all the work and support each other, guarding the traditional salt field of hand-made salt with a positive attitude towards life. The Jibu family, who are mining salt in India, have been connected with salt field for generations. They still protect the desert salt beach

and adhere to the ancestral manual salt making mode against the process of industrialization of modern salt producing.

The film faithfully records the real living state of salt workers in all corners of the world. Salt is no longer a common condiment or a daily commodity on the shelves of shopping malls, nor is it the memory of the taste of delicious food between people's lips and teeth, but the living reality and life recognition closely related to people who live on salt. From each story on traditional salt making, the audience can not only learn about unknown characteristics of salt, but also understand life philosophy or survival wisdom contained in the stories between human and salt. It can better be understood the humanistic care for salt workers in different living environments and the deep concern for human survival.

## 2. EMOTIONAL CONNECTION: INTERPRETATION OF COMMON LIFE EXPERIENCE

Nature documentaries, such as "March of the Penguins", "Winged Migration", "Oceans", "Planet Earth", reveal the general laws of nature and the instinctive emotional connection between groups or tribes among animals (non-human). Even though such works seem distant from human life, the audience could still recognize its aesthetic significance and cultural connotation from their creation. A humanistic documentary as "Behind Salt" is, we can feel the beautiful scenery of "salt" in nature in its splendid visual presentation of "salt". In the Danakil Depression of Ethiopia, known as the "hot pole" of the earth, the dazzling salt formed on the surface after the eruption of an active volcano is precious "white gold" in the eyes of Alphas. Chaka Salt Lake in Qinghai, the largest salt land in China, has attracted millions of tourists with its vast territory and magnificent landscape. The appearance of Lake Retba in Senegal is so amazing as pink silk, exuding an extremely romantic color because of salt. The purity and beauty of the natural landscape of these salt farms provide the audience with an impressive cognitive experience, which can later be transformed into the appreciation and aesthetic pleasure of exquisite natural beauty. However, Alpha people's laborious salt mining work under the heat only brought about meagre income; Salt workers in Chaka Salt Lake hardly have time to enjoy the beautiful scenery, instead, it is obviously more practical for them to collect salt; the original way of salt extraction in the water of Lake Retba has been largely detrimental to human skin and reproductive ability. The contrast between the reality of human existence and the natural landscape has formed contradiction where the audience could observe the living conditions of salt workers and understand the meaning of life and dignity of existence. The work touches people's inner feelings by filming various problems in the production, transportation and use of

salt. The emotional consciousness brought by salt, such as hope, tenacity, diligence or greed, frustration and pessimism, has repeatedly trigger the audience's emotional recognition of salt and form a kind of "salt emotion" that expresses the cognition of the relationship between man and nature, salt and life.

The documentary focuses on intergenerational contradictions and realistic differences in life. The gap between the old and the young in the family and the historical process of industrialization deeply reflect the conflict between tradition and modernity. On the one hand, the old generation's traditional crafts and means of livelihood are being questioned by the young. The laborious and outdated production methods of traditional crafts can no longer coexist with the modern salt industry. For example, Hagiwara of the Tireg tribe wants his grandson to inherit the ancestral profession of transporting salt in the camel team, while the 12-year-old boy doesn't want to do such a difficult job. The Jibu family in India are barely living in the traditional life mode of making salt to support the whole family. They reluctantly employ workers to participate in the salt collection before the rainy season. On the other hand, it is inevitable that the traditional manual salt making mode will eventually be replaced by the industrialized modern ways. The choices and changes of salt workers in the documentary increase the tension of the opposition and conflict in these stories. Master Cheng, a salt worker in Laizhou Bay, began to consider changing to diving as a fisherman to increase his income. Hagiwara started to accept the choice of his grandson and planned to dissolve the camel team after his retirement. The younger brothers of old Jibu have transferred to work in modern salt factories with higher income. Zhuoma, Yuzhen's sister, gave up making salt and opened a noodle shop. The influences and changes brought about by salt on human life demonstrate the shared emotion and destiny of mankind, and the true record of people's helplessness, courage and power in life helps the audience quickly establish an understanding of such oppositions or conflicts, and at the same time, showcases that the documentary creators seek the common psychological consciousness and emotional identity of all mankind.

## 3. HISTORICAL CHANGE: MACRO WORLD EXPRESSION FROM A MICRO PERSPECTIVE

Salt represents one of the five indispensable flavors in human life and runs through human historical evolution and social changes. There are already plenty of excellent domestic documentaries on salt, including "Salt History" (2007) that tells the knowledge and stories about salt in Shanxi, Chongqing, Sichuan and Yangzhou, and analyzes the relationship between salt and human society, economy and politics, "Sea Salt Legends"(2016) that presents the origin, evolution and development of sea salt for 5000 years, exploring the relationship

between sea salt and the rise and fall of the whole nation, “Yangzhou Salt Merchants” (2011) that elaborates the rise, prosperity and decline of Yangzhou salt merchants, as well as “Chongqing Salt” (2018) whose creation team visited the historic sites of salt making and transporting in Chongqing to explore the impact of Chongqing salt on the economy, society and culture in this region. However, “Behind Salt” is different from the above-mentioned domestic TV documentaries. It employs a multi angle narrative from the perspective of globalization and deeply investigates the significance and impact of “salt” on the evolution of world history and the whole human society. The documentary not only records the story and fate of the Chinese people and salt, but also illustrates the historical changes of the macro world from the micro perspective of salt.

It is not necessary to stick to linear narration when presenting the world in documentary images. Salt constitutes a symbol, a micro perspective from which the macro world of human life has been differently exhibited and narrated. The audience’s cognition of the world will exceed our previous experience and become more colorful. From the perspective of an individual, salt is the traditional means of livelihood for people’s survival. The roller workers in Zigong, Sichuan, fix and maintain the ancient salt making machine, women from Heijing Town, Yunan, secretly make salt for themselves, and the salt workers in Lake Retba soak themselves underwater to collect salt. The traditional method of salt making has been used since ancient times, and now the salt workers need to face the challenges of industrial transformation and survival destiny in the changes of the times. From the perspective of family, salt means people’s adherence to and choice of lifestyle. Ciren Yuzhen took over more salt fields in order to maintain the prosperity of tourism and meanwhile create a better life for her children. Old Jibu reluctantly chose to hire workers to reduce the risk of family salt collection. From the perspective of society, salt stands for the massive accumulation of wealth. The continuous expansion of Venice’s salt trade and its control over salt formed a powerful commercial force. Large-scale employment relations appeared, and is considered to be the earliest form of capitalism in the world; The salt industry in Zigong, Sichuan, gave birth to the earliest joint-stock operation and well contract with clear responsibilities and rights in China. From the perspective of nation, salt is a symbol of national prosperity and strength. Throughout history, the protracted competition between Germany and Austria for underground salt mines at the border represents the nations’ plundering of wealth and evolution of civilization. The Western Xia regime and Northern Song Dynasty launched large-scale war and endless negotiations over salt. Even in the new patterns of globalization in the future, salt is still an important factor in national competition,

and it will gradually turn into the development and competition for new energy under the expansion of new borders, like the fierce competition for lithium in Bolivia’s salt lake. Based on salt, the documentary narrates freely in space and time, helping the audience rebuild the structure and cognition of the whole world layer by layer.

When telling history, the documentary adopts a variety of modern documentary techniques to make the pictures more vivid. The first one is situational interpretation that reproduces historical events with the performance of actors in specific scenes. The situation reproduction of important historical events such as the ancient Roman Imperial War, or the American Civil War, and normal businesses like women in Heijing town producing salt, makes the scene narration more lively. Storytelling narration and its background music are effectively combined to achieve dramatic effects. The second are historical data collection and expert interviews. Expert interview is an indispensable element in historical documentaries, which is not only the protection of authenticity, but also the expression of ideas[1]. Through interviews with local salt museums, photographers, experts, and scholars, the documentary highlights the historical accumulation and rich culture of salt. The third is the different presentation methods of salt workers. In addition to the image records of salt makers, salt pickers or salt transporters in different stories, there are also group portraits of salt workers and historical materials and photos of salt industry, such as the photos of salt workers in the French photography exhibition—“Kilometer of Salt”. The photographer pays attention to the living conditions of salt workers, aiming to reflect the hardships and also the happiness of salt workers through art, and thus eulogizing our sacred life. The fourth is the filming and display of visual wonders. On the one hand, a large number of aerial shots in the work establish an intuitive and comprehensive impression of salt land to the audience. On the other hand, scenes of the flavor food, historical sites and cultural customs related to salt, presents the audience the inheritance and persistence through thousands of years.

#### 4. CULTURAL MISSION: CONSTRUCTION OF INTERNATIONAL NARRATIVE PATTERN

The creative concept of “Behind Salt” embodies the international vision of domestic documentaries in the new era and also our mastery and construction of a grander narrative pattern. The international construction of documentary narrative pattern should be reflected in narrative techniques, narrative strategies, and ways of expression. Mostly, China’s traditional documentaries lack effective international communication as they pay too much attention to publicity effect. The shortage of international narrative performance is mainly from three aspects: First, few narrations in forms of image but too many

in explanations or interviews. Second, poor narrative strategies, without multi-line narrative and structural arrangement in the work. Third, single but not diversified conclusion expression. In the process of global communication, a growing number of domestic documentaries began to pay attention to telling Chinese stories in international languages, such as “The Forbidden City”, “Tales From Modern China” and “A Bite of China”. They focused on the selection of narrative perspective, the arrangement of narrative structure and the diversity of narrative levels, making these documentaries attractive. In “Behind Salt” the narrative places are spread all over the world. With “salt” as the running through clue, the narrative subject ranges from the characters of different times, races, regions and countries. It meets the cultural and viewing needs of the public with a more open narrative pattern in the perspective of globalization, so as to realize the documentary’s cultural mission to clarify choices, explain history and enhance human mutual understanding[2]. It also proves that the new generation of documentary creators are fully conscious of their cultural mission and take seriously the narrative expansion and cultural communication of documentaries under the background of globalization.

Globalization in the field of culture means that culture is turning homogeneous and unitary, but cultural diversity of all ethnic groups and countries also means that there are always non fusible foreign cultures within the world. People in different countries and regions need to maintain respect for and understanding of other cultural traditions, and reasonably carry out the integration of different cultures. It is a fact that nature documentaries are easier to obtain global cultural influence than humanistic and historical ones, but humanistic documentaries should strive to seek shared values and express universal ethical themes, such as peace, freedom, equality, harmony, diligence, courage and optimism, that are pursued by all mankind. With the help of the micro crystal salt, “Behind Salt” extolled the qualities of industry and optimism of salt workers and even the power of life, leading the global audience to understand and recognize the universal achievements of human civilization. However, while individuals are participating in the long process of cultural creation, culture also imprints individuals with a unique impression which forms into cultural unconsciousness. This cultural unconscious remains in the individual and national body as the impression in painting. It is integrated with individual life and national history. Every individual and nation cannot

get rid of this cultural imprint[3]. Therefore, the process of globalization will inevitably bear the pressure and problems that force heterogeneous cultures to converge and evolve to homogeneous cultures, and the cultural communication is bound to be overturned or limited. This is the study direction worthy of exploration in the international expression of humanistic documentaries, that is, to seek more open creative ideas and narrative methods to elaborate profoundly the significance of the topic, and to investigate the flexible strategies to solve problems after conflicts and collisions. “Behind Salt” attempts to harmonize salt with far-reaching meanings reflected in character stories, human emotions, life philosophy and historical changes. Whether it is the story of salt in China or foreign countries, it is reasonably compatible and properly arranged. From the portrait of different salt memories and common salt beliefs between China and foreign nations, The audience can not only aesthetically enjoy the pleasure of empathy and the recognition of universal values, but also learn the significance of individual’s concern and acceptance of heterogeneous cultures. What the creator team are trying to express is the care and concern for the survival of all human beings as well as our view or attitude towards different cultural integration throughout historical progress. The international vision of the creator makes the narrative pattern of “Behind Salt”, and the strategic perspective also reveals our responsibility for cultural communication and strong cultural confidence of the nation. This cultural confidence is in essence a reflection of our command in international documentary creation on the basis of telling Chinese stories. China’s gradually mastering the initiative and discourse power in the international communication of documentaries—great evidence of its increasing cultural soft power. It would be the main driving force and major directions of China’s documentary creation in the future to establish the international narrative pattern of domestic documentaries, and at the same time undertake its cultural mission to seek the well-being of all mankind.

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# Research on Localized Music Education from the Perspective of Multiculturalism

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**Abstract:** Musical elements have a wide range of sources, which provides good conditions for music innovation. To achieve good results in music education, it is necessary to develop a diversified perspective and expose students to more music knowledge, so that students' music literacy can be effectively improved. This paper mainly explores the local music education from the perspective of multiculturalism.

**Keywords:** Multiculturalism; Music education; Localization

## INTRODUCTION

Now that multimedia has been integrated into people's lives, it allows music to be used in various industries. With the gradual improvement of people's aesthetic ability in recent years, and the continuous development of music-related industries, the society needs more teachers for music training. Music education can not only improve the quality of Chinese nations, but also effectively accelerate the rise of new service industries. Music training teachers should not be limited to a certain form of education. They can add localized elements such as folk songs and Peking opera in the training to innovate the music and make music develop well.

### 1. THE SIGNIFICANCE OF MUSIC EDUCATION

Music has a profound impact on people's quality. On the issue of cultivating people, music is both a means and an goal. In order to give a good music class, it is important to mobilize the positive emotions of the students in the class according to the psychological characteristics of contemporary students and the actual situation of the students. How to make full use of music class to maximize the value with the use of the limited time in class have a more profound and lasting positive impact on the future development of students.

Numerous examples in ancient and modern China and abroad have proved that music education plays an important role in human development, and there are many interesting stories about music in which scientists' inventions benefit from [1]. When we are carrying out quality-oriented education, it is not feasible without music education. Music education plays an irreplaceable role in improving students' musical literacy, cultivating their sentiments, improving scientific literacy, and cultivating good will and quality. The promotion of quality-oriented

education has opened up a broad world for the development of music education. Music education is facing a rare development opportunities experience since the founding of the People's Republic of China. And the continuous prosperity of China's economy have provided favorable conditions for the further development of music education. Nowadays, when music education is increasingly valued by the whole society, musicians must constantly improve their own quality, and take effective methods to carry out music education for students according to the actual situation of students.

### 2. CURRENT SITUATION OF MUSIC EDUCATION IN CHINA

At this stage, China mainly implements music teaching by referring to the Western music education system. Because the West has a relatively complete music theory system, and its musical instruments have strong expressive power and a wider range of vocal range. However, China's music theory is still in the research, and musical instruments have not yet exerted their maximum performance ability. Comparing music with other art categories, the music form pays more attention to innovation and change. Music can be all-encompassing. As long as the music can bring people a sense of pleasure, local features such as folk songs and Peking opera can be incorporated into the music. However, the current elementary and intermediate music education does not have complete theories, and the theoretical knowledge is relatively outdated. When teachers carry out musical skills training for students, they mainly instruct students to perform Western instruments such as piano. The musical skills mastered by each student are relatively single, which does not meet the development requirements of modern society. China has a vast territory, a large number of ethnic groups, and abundant music resources. However, because music education has always paid more attention to the Western model, the development of music in our country has gradually become rigid, and it will also lead to the loss of many excellent localized music forms in our country [2]. In order to effectively inherit our country's excellent localized music forms, it is the general trend to create diversified localized music.

### 3. STRATEGIES FOR DEVELOPING LOCALIZED MUSIC FROM A DIVERSIFIED PERSPECTIVE

3.1 To integrate Chinese and Western music, and

guide by open music theory

Generally, primary and intermediate music education pays more attention to skill training and less to music theory education. However, teachers still need to explain theoretical generalization to students, and they still need to have core guiding ideology in the process of explanation. Music theory is not fixed. Every country has their own unique music theory. Although the West has more mature music theory and more literature can be found, the western music theory is still many places to be improved. Chinese music theory is relatively lacking, and there are many places that can be deeply explored. In the teaching process, attention can be paid to the continuous perfection, openness and richness of music theory to students, so as to effectively stimulate the music interest of students with music theory potential [3].

### 3.2 To enrich and localize music skill training

At the present stage, the focus of China's music skill training is to carry out piano instrument performance and vocal music practice for students. Vocal music practice skills are relatively objective. Vocal music practice is related to physiology, and students need to practice repeatedly to achieve results. The vocal music repertoire students practice should follow the principle from easy to difficult, and students are easy to feel boring in the whole learning process [4]. From the perspective of diversified teaching, teachers can appropriately increase different types of practice tracks. The practice tracks can be domestic, local folk and foreign. For example, music teachers can increase the practice of localized songs such as Singing Folk Songs and Jasmine in the classroom, so that students can learn more localized music tracks. When training students in musical instrument skills, teachers can allow students to choose their favorite musical instruments to practice. They can also recommend localized musical instruments to students, such as Waist drum, Matouqin, Flute, and Urheem, and guide students to play with national musical instruments. Through unique national musical instruments, teachers can improve students' enthusiasm for learning musical instruments, broaden students' musical vision, further enhance students' mastery of musical instrument skills, and promote localized national music culture [5].

### 3.3 To localize music aesthetics

Music aesthetics have the characteristics of privacy and publicity. Many classical repertoires have been accepted by the broad masses of the people, such as

Destiny Symphony, and Turkey March. Teachers should try their best to expand students' contact with music in class, guide students to think and master the emotions that music melody wants to express, so that students' aesthetics can be significantly improved. Chinese music has high aesthetic repertoires such as The Moon Reflected In Er-quan and Bu Bu Gao. Teachers need to introduce more localized national music to students in class, which can not only enable students to enjoy good spirit, but also help to cultivate students' patriotism and promote students to grow into a comprehensive music talent [6].

## 4. CONCLUSION

Music education is an important content of quality-oriented education in our country, and it has a certain impact on the growth and success of students. Music needs to be innovated. Under the modern diversified vision, music education can be guided with open music theory, and appropriately add localized elements in music teaching and aesthetics. Teachers introduce more localized music theories to students, and recommend excellent localized repertoires and musical instruments to students, so that students' music contact has been continuously expanded and their music aesthetics can be improved.

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# Research on the Construction of Essential Data Principles under Platform Economic Data Governance

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**Abstract:** The legislation on the principles of necessary facilities in the field of platform economy has not been exhausted, resulting in a lack of analysis and regulatory tools to effectively respond to platform bans. Therefore, essential data principle should be established, and the relevant platforms should be used as necessary facilities instead of relevant data. When determining necessary facilities, in addition to considering the amount of platform data possession, substitutability, non-replicability, the degree of dependence on transaction counterparts, and the impact of open platforms, it is still necessary to consider the interconnection effect between platforms and the barrier effect of new products.

**Keywords:** Platform economy; Platform ban behavior; Essential facilities principle; Essential data principle

## DEFINING ESSENTIAL FACILITIES PRINCIPLE DATA

(1) The specific connotation of essential facilities principle facilities

Principle of Necessary Facilities means that when a dominant company controls a facility that is vital to the downstream market or adjacent market, the law attaches it to provide access to competitors or companies in adjacent markets under reasonable conditions[1]. US, the European Union, Germany and China have all applied essential facilities principle facilities to varying degrees, but the scope of application is different. In US, the application of the essential facilities principle is usually limited to the scope of tangible and necessary facilities. In Germany, it has been extended to the field of digital economy. In China, following the "Antitrust Guidelines of the Antitrust Commission of the State Council on Platform Economy", essential facilities principle facilities began to be applied to the digital governance of the platform economy.

(2) The digitization of essential facilities principle facilities: essential facilities principle data

In the anti-monopoly regulation of refusal to deal, essential facilities principle facilities has a higher status. The Chinese legal circles have begun to discuss the compatibility of essential facilities principle facilities with the platform economy. Under the platform economy, the non-competitiveness of

data is more beneficial to the application of essential facilities principle facilities[2]. The traditional economic model is composed of tangible infrastructure, while the

necessary facilities, but intangible assets, data and other intangible facilities are considered the pillars of the platform economy. These intangible facilities may become the subject of the principle of compensation for essential facilities under the platform economy. Therefore, it is necessary to construct a new principle of the digital economy era-essential data principle.

(3) The specific connotation of necessary data inessential facilities principle data

Essential data principle means that when a platform controlled by a company becomes a necessary facility for competitors in the downstream market or adjacent markets to enter the market, and the platform cannot be copied by other competitors, the law attaches it to the competitor or adjacent market under reasonable conditions. Of companies provide platform opening obligations to eliminate the effect of eliminating and restricting competition caused by platform bans. From a logical point of view, the necessary facilities of the necessary data principle should be related data, and it is still difficult to identify related data as necessary facilities. First, the low-density value distribution of data, the inherent strong liquidity and ease of duplication of data have greatly increased the difficulty of identifying necessary data. Second, data is highly dependent on the platform. Third, it is advisable to adopt data benchmarks and adopt other benchmarks for replacement.

## INVESTIGATION AND ANALYSIS OF NECESSARY FACILITIES OUTSIDE THE TERRITORY

(1) Investigation and analysis of U.S. precedents  
The principle of necessary facilities originated from American case law, and through a series of cases, the rudiment of essential facilities principle facilities was outlined—the concept of essential facilities principle facilities and its general application conditions[3]. From the Terminal case in 1912 to the MCI case, the specific connotations and applicable conditions of essential facilities principle facilities in American law have gradually become clear. In the Hecht case, District of Columbia Circuit Court made a

preliminary summary of the applicable conditions of essential facilities principle facilities in the field of tangible facilities. At this time, the conditions for the application of essential facilities principle facilities are not yet mature, and the limitations of individual cases are relatively large. Subsequently, in the MCI case, the essential facilities principle has the possibility of universal application through a highly abstract summary.

#### (2) Investigation and analysis of EU jurisprudence

The European Union has adopted an analysis framework that is clearly different from that of US. More inclined to essential facilities principle facilities as an analysis tool to regulate the abuse of market dominance. In EU judicial practice, it is claimed that necessary facilities have expanded from physical facilities to intangible property and services, and even intellectual property rights[4]. Combining intellectual property rights with the different attributes of other services and goods, summarizing the applicable conditions of the new principle of necessary facilities-the "impeding effect of new products" have been introduced. Since the field of intellectual property pays more attention to the protection of innovation, the application of essential facilities principle facilities in the field of intellectual property requires an additional guarantee of innovation conditions-the new product hindrance effect, that is, the rejection of transactions in the so-called necessary facilities will hinder the emergence of innovative products that meet consumer needs[5].

#### (3) Investigation and analysis of German legislation

The German "Anti-Restriction of Competition Law" has undergone three revisions so far-June 2013, June 2017 and January 2021, following the changes in economic development, the application of essential facilities principle facilities is mainly divided into applicable conditions and defense situations Two parts. In the 2021 revision, Article 19, paragraph 2, item 4 of the Anti-Restriction of Competition Law is amended[6]. So far, the German "Anti-Restriction of Competition Act" has expanded the scope of application of the principle of essential facilities, with particular emphasis on the need for access to data and intellectual property rights. The application of the principle of facilities. In addition, the German "Anti-competition Law" has also added a new clause "abuse of enterprises that is of overriding cross-market importance to competition", and supplements Article 19[7].

### 3. APPLICABLE CONDITIONDS OF THE ESSENTIAL DATA PEINCIPLE

#### (1) Legal conditions of the necessary data principle

Determining whether the relevant platform is a necessary facility, details as follows: First, the amount of relevant platform data. Second, non-replicability refers to the fact that the relevant platform is not reproducible in terms of facts, economy, and law.

That is, the limitations of technological development, the illegality of the replication platform, and the high economic cost of the replication platform prevent it from being reproducible. Other competitors implement platform copy behaviors. Third, the degree of dependence on the transaction counterparty. The degree of dependence of the trading counterpart depends on many factors, which can be quantitatively analyzed by analyzing the curve of the number of users on the platform and the curve of the change in the trading volume of the platform.

#### (2) Traditional conditions of the necessary data principle

From the case law source of the necessary facilities principle, the traditional conditions of the necessary data principle mainly have three points: First, the monopolist is in a dominant position in the market. Second, platform bans will greatly reduce the competitiveness of the market, that is, relevant platforms are necessary to enter the downstream market to compete, and refusal to trade will rule out downstream competition. Competitiveness is actually a result-oriented applicable criterion, with "competitiveness" as the result-oriented, returning the focus of antitrust review to the nature of competition law, and avoiding the tendency to protect competitors when the government interferes. Third, relevant platforms are effectively open.

#### (3) Additional conditions for essential facilities principle data

The following two conditions should be considered when relevant platforms become necessary facilities: "platform interconnection effect" and "new product hindrance effect." First, in the context of platform ecosystems, the interconnection effects between platforms need to be considered. The role of other platforms on the platform's vertical integration chain to strengthen or reduce its market share must not be ignored. Second, under the development of innovation-driven platform economy, it is necessary to consider the barrier effect of new products. Relevant platforms have become necessary facilities, which means that relevant platforms are obligated to open the platform. To determine whether the relevant platform constitutes a necessary facility, it is reasonable to consider the impact of platform blockade on the development of "new products with potential consumer demand", especially the negative impact.

#### ACKNOWLEDGEMENT

This paper is supported by the Anhui University of Finance and Economics Graduate Research and Innovation Fund Project (ACYC2020451).

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# Research on State Obligations under the New Coronary Epidemic

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**Abstract:** The International Health Regulations (2005) are important norms for international cooperation in the prevention and control of infectious diseases, and international infectious disease prevention and control are carried out in accordance with this regulation. The outbreak of the new crown pneumonia epidemic in 2020 puts forward higher requirements for the country to respond to the epidemic, and the national obligations under The International Health Regulations (2005) should also be revised accordingly in accordance with the new international situation and the new characteristics of sudden infectious diseases. Based on this, the national obligations stipulated in The International Health Regulations (2005) should strengthen the country's obligation to prevent infectious diseases and supplement the provisions of the preventive link; the obligation to strengthen horizontal cooperation between countries is no longer limited to the World Health Organization as the core. At the same time, it supplements the provisions of the country's obligation to control the epidemic, and requires contracting states to actively control the epidemic. In this way, we can improve the international response to major public health incidents.

**Keywords:** State obligations; international health regulations; public health incidents; infectious disease prevention and control

## 1. THE SIGNIFICANCE OF IMPROVING THE NATIONAL OBLIGATIONS OF THE INTERNATIONAL HEALTH REGULATIONS (2005)

Globalization has accelerated the spread of infectious diseases. The outbreak of any infectious disease is not just a country's domestic affairs, and it is difficult for other countries to survive alone [3]. Improving the relevant provisions of the State's obligations in The International Health Regulations (2005) is a manifestation of the "tracing upstream" policy [1] established by the public health mechanism. The current research on the deficiencies of The International Health Regulations (2005) mainly involves the compliance dilemma of the regulations themselves, the public health system, the construction of the international prevention and control mechanism, and the problems in the construction of the "core capacity" of the contracting parties, as well as suggestions for amendments and improvement

measures. There is less research on the national obligation to respond to sudden infectious diseases. Therefore, strengthening national obligations under the epidemic is essential for effective control of the epidemic. Combining this new crown epidemic, it explains the problems of the national obligations under The International Health Regulations (2005) and proposes corresponding amendments.

## 2. INSUFFICIENCY OF NATIONAL OBLIGATIONS UNDER THE INTERNATIONAL HEALTH REGULATIONS (2005)

(1) Focus on prevention and control over prevention  
The State's obligations under The International Health Regulations (2005) are mainly to require countries to do a good job in prevention and control. The main obligations of States parties to the epidemic are also limited to monitoring and reporting. However, there are few provisions on the state's prevention obligations for the epidemic, which is very important for control. The epidemic is extremely unfavorable. The prevention work of the public health system mainly includes two aspects. On the one hand, when an epidemic occurs in one country, other countries should take timely measures to prevent it. "When an infectious disease outbreak occurs, the first few months are often the best time for epidemic control. Once this time is missed, the difficulty of epidemic control will increase at a geometric rate." [2] On the other hand, countries should improve their own public health system. The health system is prepared for emergencies. The construction of the public health system is similar to "repairing soldiers for a thousand days, and employing them for a while." A complete public health system will prevent the large-scale invasion of infectious diseases and buy precious time for countries around the world to respond to infectious diseases. Therefore, prevention is of great significance to the control of infectious diseases, and doing a good job in prevention will greatly reduce the burden of prevention and control. However, the duty of prevention was not written into The International Health Regulations (2005). This deficiency was also revealed in this new crown pneumonia epidemic and caused great losses.

(2) Lack of specific regulations for international assistance

International assistance should be provided in response to different situations in response to infectious diseases. The level of development of the

contracting states is different, and the level of public health also varies greatly. For some poor countries that do not have enough funds to deal with the epidemic, and there is no complete public health system to deal with the epidemic, international assistance for these countries is particularly important[3]. However, The International Health Regulations (2005) provide too general provisions on international assistance. The provisions on international assistance are limited to monitoring and evaluation, providing technical cooperation and logistical support, and mobilizing financial resources to provide support to developing countries, that is, it is limited to various countries. There is no clear stipulation on how the contracting states and international organizations should do it. All this has led to the failure of international aid to function in a timely and effective manner. A country provides international assistance to other countries not only for the epidemic prevention and control of the aided country, but also for the world's epidemic prevention and control in the long run. At the same time, this kind of assistance should include before, during and after the epidemic, so that it can play the role of international assistance.

### 3. IMPROVING THE RECOMMENDATIONS OF THE INTERNATIONAL HEALTH REGULATIONS (2005) ON THE PROVISIONS OF NATIONAL OBLIGATIONS

(1) Relevant regulations for supplementary prevention links[4]

Responding to infectious diseases should include prevention and control, both of which are indispensable. To some extent, the role of prevention will be greater than the role of control. Doing a good job in the prevention of infectious diseases will reduce the pressure of control and avoid the large-scale spread of infectious diseases. First, a sound public health system should be established. The construction of the public health system requires sufficient professionals, advanced equipment and sufficient capital reserves to deal with acute infectious diseases. The public health system requires long-term construction and requires a lot of money. In the process of construction, scientific forecasts should be made about how many personnel, equipment, and funds are needed. Second, expand the scope of quarantine work. Routine quarantine work is not limited to the process of the outbreak. After the epidemic is over, follow-up and testing must be done, and at the same time, the prevention work before the occurrence of the epidemic must be done[5].

(2) Strengthen horizontal assistance and information sharing between countries

All countries should correct their attitudes towards the epidemic, abandon the mentality of beggar-thy-neighbors, and jointly fight the epidemic. First, establish an information sharing system between countries. The current information sharing

system is a vertical information sharing system with the World Health Organization as the core. Countries report their own situation to the organization, and the World Health Organization will continue to take measures after evaluation. The country that first discovers an infectious disease can share information with neighboring countries and regional organizations, so that neighboring countries will be given sufficient time to prepare and respond to the epidemic in a timely manner. Second, the combination of resource assistance and technical assistance. Resource assistance mainly includes funding, medical equipment, and professional assistance. Technical assistance not only refers to the provision of technical support when the epidemic breaks out, but also includes the delivery of advanced medical technology from the country to these countries. Technologically advanced countries can provide technical assistance to these poor countries by sharing medical technology, training medical personnel, and sharing medical experience.

### 4. THE CONCLUSION

The sudden new crown pneumonia epidemic has brought us more reflection and thinking. It can be seen from this epidemic that a series of measures taken by the country in response to the epidemic have an important role in effectively controlling the epidemic. Improving the relevant regulations on national obligations under the epidemic and strengthening the country's responsibilities to the international community are in line with the development trend of normalization of epidemic prevention[6]. The establishment of an international cooperation mechanism and an international prevention and control mechanism from the perspective of national obligations can not only promote the improvement of the International Health Regulations, but also strengthen the country's responsibilities to its citizens and the international community. No country can stand alone in the face of the epidemic. All countries should work together to deal with the epidemic. In this process, countries should assume more national obligations.

### ACKNOWLEDGEMENT

This paper is supported by the Anhui University of Finance and Economics Graduate Research and Innovation Fund Project (ACYC2020459)

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# Research on the Reform of Advanced Mathematics Teaching in Colleges and Universities Based on "Micro-lecture + Inverted Classroom"

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**Abstract:** Advanced mathematics is a basic subject, which is relatively abstract, strong in logic, and has a wide range of applications. A good study of advanced mathematics is helpful for cultivating students' logical thinking, analytical reasoning, practical and innovative abilities. And it also plays an important role in improving students' overall quality, establishing good thinking habits and future development. The teaching of such an important course is particularly important. And the teaching model based on "micro-lecture + inverted classroom" truly embodies the teaching philosophy of teacher-led and student-orientation. With the aid of information tools, the innovative integration of modern advanced information technology and teaching can improve teaching efficiency, improve teaching quality, and optimize the teaching effects.

**Keywords:** Colleges and universities; Advanced mathematics; Teaching reform; Micro-lecture; Inverted classrooms

## 1. RESEARCH BACKGROUND

The information age has arrived. Advanced mathematics courses have a wide range of applications in various fields such as social sciences, engineering technology, and economic management. The teaching contents, mathematical ideas and problem-solving methods of advanced mathematics are of great significance to expand students' thinking and improve students' comprehensive quality. The transformation of advanced mathematics teaching from a traditional teaching model to a diversified one, especially the innovative use of the "Internet +" education model, will play a positive role in improving the quality of teaching.

Advanced mathematics based on "micro-lecture + inverted classroom" enriches the teaching content and forms. The development of Internet technology is gaining momentum, boosting the informatization development of higher education, and the combination of online and offline teaching methods has become an important development direction in the teaching reform. Inverted classroom is an effective way to achieve mixed teaching. Different

from the traditional cramming teaching mode, inverted classroom improves the communication and interaction between teachers and students, and makes them have more tacit understanding. The content of advanced mathematics courses is boring. Traditional classrooms take teacher's lecture as the main form, while inverted classroom emphasizes that the taught content is realized in the form of micro-lectures. The class can be used to effectively plan teaching activities because of its short time and strong pertinence.

## 2. CURRENT SITUATION

Due to the abstract attribute of advanced mathematics curriculum itself, many students are afraid of difficulties and lack interest in learning. Many students passively accept knowledge, and they are not clear about their learning objectives and learning planning, and their learning enthusiasm and initiative are not enough, so that the learning results are not ideal. For students, the learning content is boring, and it will be difficult to understand and apply some complex problem-solving methods and ideas. The class time of the semester is relatively tight, so it is not easy to learn and master this subject in a limited time. In the current teaching mode, there is still a lot of work to be done in pre-class guidance and after-class supervision. Many students fail to consolidate and strengthen in time after class, and they do not have a solid grasp of mathematical problem-solving methods they have learned, and are not proficient in the understanding and application of theorems and formulas, resulting in unsatisfactory test results. At the same time, students' ability of autonomous learning, exploration and innovation also need to be improved. In the classroom, because of the large capacity in the course, it mainly depends on teachers' explanation. In the whole teaching process, the forms and contents of interaction between teachers and students are limited, and students' classroom participation, learning experience and sense of achievement are not strong. In terms of teaching methods, it is necessary to further strengthen the use of information technology to carry out teaching activities, so as to visualize and apply the

abstract mathematical knowledge and continuously improve students' interest in learning. There are differences in students' knowledge level, thinking level and ability level. Therefore, it is necessary to practice teaching students according to their aptitude and improve the teaching according to students' personalized learning characteristics.

### 3. THE SIGNIFICANCE OF "MICRO-LECTURE + INVERTED CLASSROOM" TEACHING MODE

Inverted classroom can mobilize students' participation in learning to the greatest extent, have a strong atmosphere of classroom discussion and exploration, enhance students' sense of learning achievement, improve students' interest in learning, and truly achieve the teaching philosophy of teacher-led and student-orientation. There is good communication and interaction between teachers and students, which makes the tacit understanding between teachers and students better. The micro-lecture has a short time and can further refine the key points and break through the difficulties according to the specific knowledge points or methods. Compared with traditional teaching, students can choose the time to carry out independent pre-class preview and after-class review, which is helpful to consolidate and strengthen the improvement of knowledge methods, and to improve the learning results. By using the teaching mode of "micro-lecture + inverted classroom" and the information tools, we can improve students' learning knowledge system, stimulate students' learning enthusiasm, initiative and potential, comprehensively improve students' comprehensive practical and innovative ability to analyze and solve problems, improve teaching efficiency and teaching quality, and optimize the teaching effect.

For instance, for the more abstract geometry content in advanced mathematics, we can assist students in special preview in the form of micro-lecture before the class. In the inverted class, students explain their problem-solving ideas and carry out group discussion. Students turn passive listening to mathematics class into active thinking and active participation. Students feel that the mathematical problems and solutions they learn are less abstract and boring, and they overcome the fear of difficulties and become more confident and interested in learning. The use of micro-lecture is conducive to students' independent review, detection, and consolidation after class, and can achieve ideal learning results.

### 4. KEY POINTS OF TEACHING REFORM

Appropriate knowledge points are selected in the advanced mathematics course to make a micro-lecture. Online courses can be built relying on an appropriate platform, inverted classroom teaching can be implemented with the use of Rain Classroom, and teaching reflection can be done timely through Rain Classroom.

In the classroom, students have a good understanding

of the monotonicity and extremum of functions in the middle school stage, so it is suitable for students to share. Teachers can publish a list of learning tasks before the class: (1) how to discriminate the monotonicity of a function; (2) how to find the boundary of the monotonic interval of a function; (3) to induce the process of finding the monotonic interval of a function; (4) how to define the extremum, and what is the difference and connection between the extreme value and the maximum value; (5) to find examples to interpret the difference and connection between the extremum and the stagnant point; (6) what method is used to judge whether a point is an extremum. In addition, for the existence theorem of Zero Points, students are invited to browse the micro-class explanations in advance after class, and then carefully look for examples related to the zero-point theorem in actual production and life such as the study of the problem of going up and down the mountain, and the problem of stabilizing the chair. After such independent study, thinking and collection of materials, examples, and induction, students will have a deeper and more comprehensive understanding of the knowledge. And they can also further strengthen their application of the knowledge and subtly infiltrate the idea of mathematical modeling. For knowledge points such as the derivative of a compound function and the Law of Robida, teachers can design test questions in advance. Students will learn related instructional video explanations after class and before class, and learn the corresponding methods by themselves. In the class, teachers can ask students, to share their learning experience and answer specific questions. Questions with good accuracy can be skipped directly, and questions with lower accuracy are given special emphasis on explaining methods, which can transform from strengthening the "teaching" of teachers to strengthening the "learning" of students, and be truly student-oriented and ensure that students achieve excellent learning results. Special attention should be paid to the moderate difficulty of the selected knowledge points and not too abstract to be understood.

Some students may not be able to keep up with the pace of the class. They may not be able to fully digest or understand the content, knowledge points and methods learned in the class, or they may not fully understand. Students can review micro-class videos after class according to their own schedule anytime and anywhere. At the same time, teachers can design the important and difficult points in students' learning into special discussion questions according to the situation of students and students. Students conduct all-round discussions after class, so as to collide with sparks of thought, find problems in time, and seek the solutions. In addition, after the completion of each chapter, teachers can arrange online chapter inspections through Rain Classroom, so as to fully

grasp the overall situation of students' learning. Teachers can set the test time in advance. After the test starts, students can choose mobile phones or computers to answer the questions. After the students answer the questions, they can submit them and see their test scores. Teachers can set qualified scores according to the characteristics of the subjects, and the order of the test questions can be set disorderly. Students whose scores do not meet the standard should return and retest. In this way, the automatic correction by the system saves the correction time. And students will have a better understanding and mastery of the knowledge points and methods they have learned after repeated exercises.

#### 5. DIFFICULTIES OF TEACHING REFORM

On the one hand, teachers have great pressure on scientific research and need to complete class tasks, so they need to plan extra time and spend a lot of energy to learn information technology, select appropriate knowledge points and make micro courses. On the other hand, some students have been used to the traditional teaching mode, they are not adapted to the new teaching mode because they need to give full play to their own subjective initiative.

#### 6. BREAKTHROUGH POINT OF TEACHING REFORM

Schools, teachers and students need to form a joint force. Teachers try to explore the most scientific and effective ways to mobilize students to actively participate in the new teaching mode. The teaching

mode of "micro-lecture + inverted classroom", as an effective carrier of the deep integration of information technology and the teaching, needs to be gradually improved in continuous exploration and practice, and it will eventually optimize the teaching effects.

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# On the Improvement of the Punitive Damages System for Trademark Infringement

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**Abstract:** In 2013, China's "Trademark Law" took the lead in introducing a punitive damages system to deal with increasingly serious problems of trademark infringement. However, it has been found in judicial practice that the application of the system has not achieved the expected results. Most cases of punitive damages for trademark infringement are not applicable to the system due to the unclear application conditions of punitive damages, difficulties for the right holder to provide evidence, and difficulties in determining the amount of compensation and so on. Therefore, in order to punish and deter trademark infringements more effectively, the application dilemma of the punitive damages system in trademark infringement cases should be resolved as soon as possible. Determine the applicable conditions of punitive damages. Clarify the meaning and standard of "malicious" and "serious circumstances". Distribute the burden of proof of the trademark owner reasonably to avoid the problem of hard proof. Determine the method of calculating punitive damages and specify the amount of it.

**Keywords:** trademark rights; punitive damages; infringement

## 1. THE CURRENT SITUATION OF LEGISLATION AND PRACTICE OF PUNITIVE COMPENSATION SYSTEM FOR CHINA'S TRADEMARK INFRINGEMENT

### (1) Legislation status

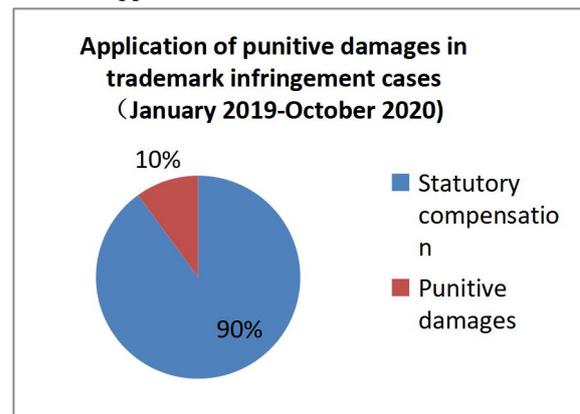
The "Trademark Law of the People's Republic of China" (hereinafter referred to as the "Trademark Law") implemented on May 1, 2014 took the lead in introducing a punitive damages system in the field of trademark infringement damage. Then it was revised in 2019 to clarify the elements of the "combination of subjective and objective". From the explanation on the "Revision of the Trademark Law of the People's Republic of China (Draft)" [1], it can be seen that in practice, the "Trademark Law" has further increased the cost of infringement in response to the high cost of rights protection and the loss of the right holder. Increasing the crackdown on infringements can not only provide more complete rights remedies for right holders, but also alleviate to a certain extent the problem that the amount of damages in trademark infringement cases is generally low.

### (2) Practice status

The author conducted case searches on the Judgment

Documents website. A total of 265 cases of punitive damages concerning trademark rights from January 2019 to October 2020 were searched. According to statistics, there are 132 cases where punitive damages have been requested and 150 cases have been punished by the court. Among them, there are only 15 cases in which right holders have obtained punitive damages, and the percentage is only 10. Judging from the implementation of the punitive damages system in the current "Trademark Law" in the past six years, the application rate of the system in damage compensation cases is very low. Facts have proved that the punitive damages system has not exerted its own advantages and functions, and its application in judicial practice is seriously insufficient.

Picture1 Application datas



## 2. THE APPLICATION DILEMMA OF THE PUNITIVE COMPENSATION SYSTEM FOR CHINA'S TRADEMARK INFRINGEMENT

### (1) No clear definition of "malicious"

"Trademark Law" in China stipulates that infringers must be "subjectively malignant", which has the positive significance of eliminating the arbitrariness of application and preventing the trademark owner from improperly expanding the boundary of rights [2]. The subjective maliciousness of the infringer is the prerequisite for the application of punitive damages. However, there are different opinions on the definition of "maliciousness" in the academic circle, mainly based on "intentional theory" [3] and "intentional theory of greater degree" [4]. What is even more regrettable is that the newly promulgated "Civil Code" still has no clear meaning of "malicious". The vague understanding of this term is not conducive to perfecting the constituent elements

of the punitive damages system. In addition, the content of the clause itself is highly abstract, which causes problems for the right holders to request punitive damages or the judges to decide cases based on this.

(2) No detailed and clear standards of "Serious circumstances"

The 2013 "Trademark Law" stipulates that punitive damages can only be applied when "the circumstances are serious", but it does not stipulate what is the standard of "serious circumstances" or "serious circumstances." The "Trademark Law" revised by the Standing Committee of the National People's Congress in 2019 still does not specify it. The ambiguity in legislation has led to the lack of a unified standard for the objective aspects of punitive damages. In practice, we can only rely on the judge's discretion to decide whether to apply punitive damages. Whether it reaches the "serious circumstances" depends on the judge's personal value judgment, which may result in unfavorable results of different judgments in the same case, and it is also very easy to appear in the phenomenon of judicial vague judgments.

(3) Difficulty for the infringed to produce evidence

According to the principle of "who claims, who presents evidence" stipulated in "Trademark Law" and "Civil Procedure Law" in China, the burden of proving the amount of compensation is borne by the infringed, and it is often difficult for the infringed to prove his actual losses or the infringer's benefits. On the one hand, the intangibility and openness of trademark rights determine the concealment of trademark infringement, which makes it difficult for the infringed to discover the infringement in time. On the other hand, the losses caused by trademark infringement are not only tangible property that can be estimated, but also intangible property such as the decline of the core competitiveness of the enterprise, and the loss is difficult to prove through objective evidence. If the problem of difficulty for the infringed to provide evidence cannot be resolved in judicial practice, the system of punitive damages for trademark infringement cannot fully perform its functions of punishment and deterrence.

### 3. SUGGESTIONS ON CHINA'S IMPROVING PUNITIVE COMPENSATION SYSTEM FOR TRADEMARK INFRINGEMENT

(1) Clear definition of "malicious"

The system of punitive damages for trademark rights is intended to form a deterrent to members of the society by punishing infringers, so as to achieve the effect of preventing the recurrence of infringements. At present, in the field of intellectual property in my country, there are two kinds of regulations on intention and maliciousness in the subjective constituent elements applicable to the system of punitive damages for trademark rights. Only when the perpetrator's infringement is highly condemned

can it be adapted to its additional punitive function. At this time, the perpetrator's subjective "maliciousness" cannot be completely equivalent to "intentional". It should be classified as direct intention, excluding indirect intention. Direct deliberate subjectively pursues the occurrence of damage results, and its subjective malignancy is the largest type of fault. Therefore, the "knowingly committed" behavior of the direct and deliberate perpetrator fully reflects the infringer's moral despicability and condemnation, which is consistent with the legislative purpose of the punitive damages system.

(2) Determine the criteria for "serious circumstances" If the "serious circumstances" are found to be a modification of "malicious" according to China's "Trademark Law", the subjective factors of the trademark infringer will become the only condition for determining the application of punitive damages. This not only violates the principle of subjective and objective consistency, but also causes a lot of trouble in Practical trials. On the objective side, evidence can basically be used to accurately determine the facts of the case, which can not only reduce the difficulty of the court to hear the case, but also ensure the fairness and justice of the judiciary. Therefore, "serious circumstances" should be understood as an expression of the objective aspects of the perpetrator's infringement, which can be determined from the following aspects: Firstly, continuous infringement. If the perpetrator infringes on the trademark right of the right holder for a long period of time, it shall be deemed as "serious circumstances". Then, repeated infringements. This proves that the infringer defies the legitimate rights and interests of the right holders and ignores the law. It is highly socially condemned and should be regarded as "serious." Finally, if it causes harm to the lives and health of citizens, it should be deemed "serious."

(3) Allocate burden of proof reasonably

When following the principle of "who advocates, who presents evidence" in litigation, trademark owners often fall into the predicament of not being able to provide evidence. Therefore, we must balance the interests of the right holder and the infringer in the distribution of the burden of proof in accordance with the principle of proof in favor of the right holder[5]. If the right holder chooses to determine the amount of compensation based on the profit of the infringer, the principle of inverted burden of proof shall be applied. The right holder only bears the burden of proof of the basic facts of the infringement, and the causal relationship between the profit of the infringement and the infringement and its proportion shall be proved by the infringer; If the right holder chooses his actual losses, the proof requirement should be reduced. In addition to providing evidence of the basic facts about the infringement, only the actual loss is related to the infringement need to be

proved. The infringer and the right holder share the risk of proof, which objectively increases the cost of infringement and plays a role in combating and deterring infringement.

#### 4.CONCLUDING REMARKS

The application of the system of punitive damages in the civil field is a hot issue discussed in the academic circles. Following the introduction of this system in the "Trademark Law", China's "Civil Code" re-established the system of punitive damages in the field of intellectual property rights, severely cracking down on trademark infringements, and ensuring the interests of trademark owners. Although the system of punitive damages for trademark infringement in China has been developed for seven years, it has not yet fully exerted its due role in punishment and deterrence. Therefore, continuous improvement of the dilemma faced by the system in judicial application is more conducive to practical operation and demonstrates its value of existence.

#### ACKNOWLEDGEMENT

This paper is supported by the Anhui University of Finance and Economics Graduate Research and Innovation Fund Project (ACYC2020480)

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# University Laboratory Education and Management Based on Blockchain Technology and DOSA platform

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Abstract. University laboratories produce a large amount of teaching and scientific research data every day. With the development of scientific research and the increase of scientific researchers, traditional laboratory management becomes more difficult and a large amount of data is wasted. In the era of big data, intelligent risk warning of security can be effectively prevented by using blockchain technology. Combining expertise with blockchain technology for laboratory security education can improve the reliability of traditional security testing. Smart contract can also be used to make bidding more fair.

Big data brings many resources and benefits, but there is also the risk of data leakage. Using DOSA platform technology, public key, private key and other core technologies, we can encrypt scientific research data, analyse teaching experiment data, statistics of using hazardous chemicals, statistics of consumables. It can greatly liberate the traditional manual accounting method, and it can also effectively prevent data tampering, which can use blockchain technology such as time stamps and smart contract.

Now laboratory safety education management need to put the fresh technology and professional knowledge, which can more efficient and more scientific management. The use of all kinds of data generated by the laboratory can get effective budget probability.

Keywords: Blockchain technology, DOSA platform, Safety education, Laboratory information security

## 1. INTRODUCTION

In the era of big data, traditional tabular records can no longer keep up with the changing and huge data. To the disadvantage of safety management, safety analysis before the experiment. And teaching, scientific research data sorting and archiving.

Traditional teaching experiment data is easy to tamper with data, and a large number of data and paper materials need to be archived. The data and process of scientific research experiments need to be supervised. In order to protect the data privacy and ensure the privacy of data, the DOSA data platform has natural advantages.[1]

Using big data management chemical laboratory has advantages which can achieve online purchase,

appointment, maintenance. Query the usage of idle equipment and valuable devices. It also can track, query and manage the real-time data of reagent cabinet. Using the concept of big data security platform, the transaction and share of laboratory scientific research data can be in a safe and controllable range.

Using the concept of big data security platform, the laboratory scientific research data can be shared in a safe and controllable scope and connected with the university security, scientific research platform, social services, public open etc.

The university chemical laboratory has too many staff, laboratory personnel frequent entry and exit, the Hazardous chemical category is complex, the Security risks is high, large amount of experimental data and privacy of data, equipment operation need professional guidance.

At present, university lab still uses traditional "ledger" records, such as statistics of the number of consumables, reagent and labware consumption statistics, utilization rate of valuable equipment, record and statistics of experimental data, the working hours of the experimenter. A large number of paper records, easy to loss and no guarantee that the data will be tampered with later.[2]

By taking advantage of the immutability and decentralization of blockchain, the laboratory is managed by means of big data. At present, only a few data management fields are dispersed in laboratory management, which is a bright spot of innovation.

## 2. LITERATURE REVIEW

### 2.1 Blockchain

Blockchain technology originated in 2008 by the pseudonym "Satoshi Nakamoto" in the cryptography mail group published the founding paper ". Blockchain has decentralization, time series data, collective maintenance, and can programming and security and credibility and other characteristics.[3]

### 2.2 DOSA

Miao, F. proposed Data-Oriented Architecture (DOA) and Data-Oriented Security Architecture, or Data Ownership-based Security Architecture (DOSA) in general sense for data security application. [4]

The brief description of DOSA: one body with two wings and generalized K-V structure. Data and

ownership are binding together as one body. [5]One wing is the Key of innate registration of the data. Another wing is the Value of innate encryption of the data by the owner's public key.

3. METHOD AND METHODOLOGY

3.1 Scope of the Study

University laboratory safety management (including dangerous chemicals, teaching and research data, security monitoring, security education and access testing based on blockchain technology.

3.2 Conceptual Framework

The lab application requirements include Hazardous Chemicals Medicince, reagent, valuable instruments etc. It needs various data from Teaching experiment, scientific research experiment, public open experiment.

DOSA can provide the platform to manage all kinds of data and to support all kinds of requirement under the data sharing and data protection mechanism.

3.3 Modelling from Technology, Technique and Tools

3.3.1The LAB platform based on DOSA

Based on DOSA platform, the management model of the laboratory is as follows:

Figure 1 shows the LAB platform based on DOSA. The LAB application requirements include Hazardous Chemicals Medicince, Rreagent ,Valuable instruments etc. It need various data from Teaching experiment, scientific research experiment, public open experiment. DOSA can provide the platform to manage all kinds of data and to support all kinds requirements under the data sharing and data protection mechanism.

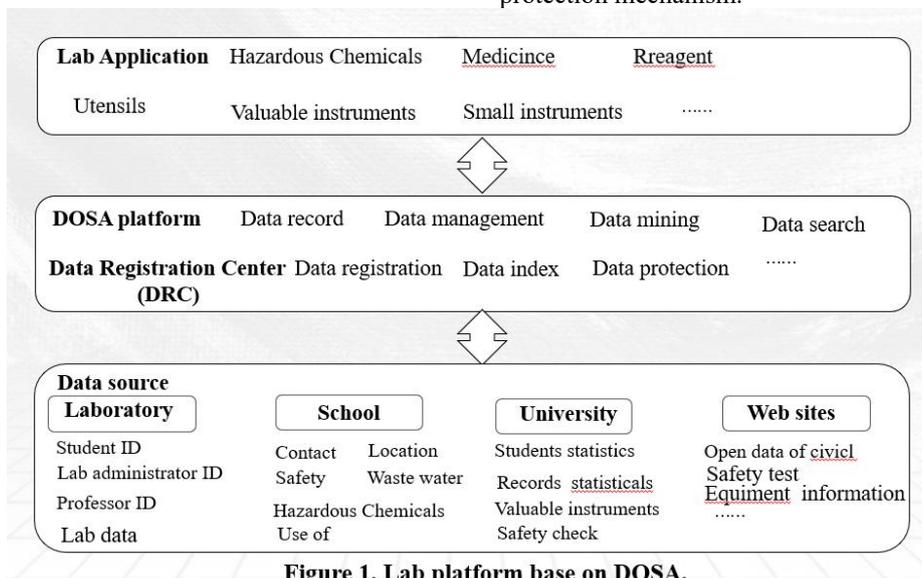


Figure 1. Lab platform base on DOSA.

3.3.2 LAB Data trading platform based on DOSA

the trading data. Figure2 shows the procedures of data trading in the platform based on DOSA.

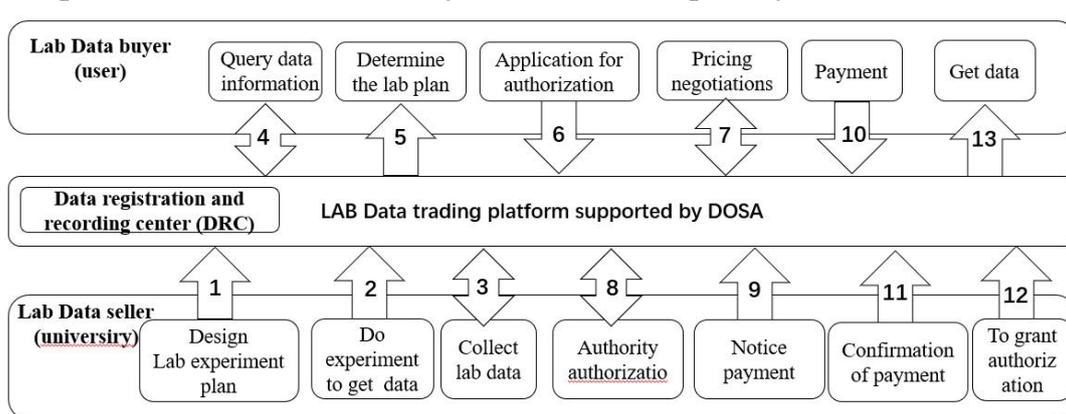


Figure 2. Lab data trading platform based on DOSA.

3.3.3 Government & university information resources sharing information based on DOSA

Government information resources sharing is concerned with different departments and is difficult

to coordinate.We can establish a sustainable system to connect data sources from university to government applications and services for all departments, shown in Figure3.

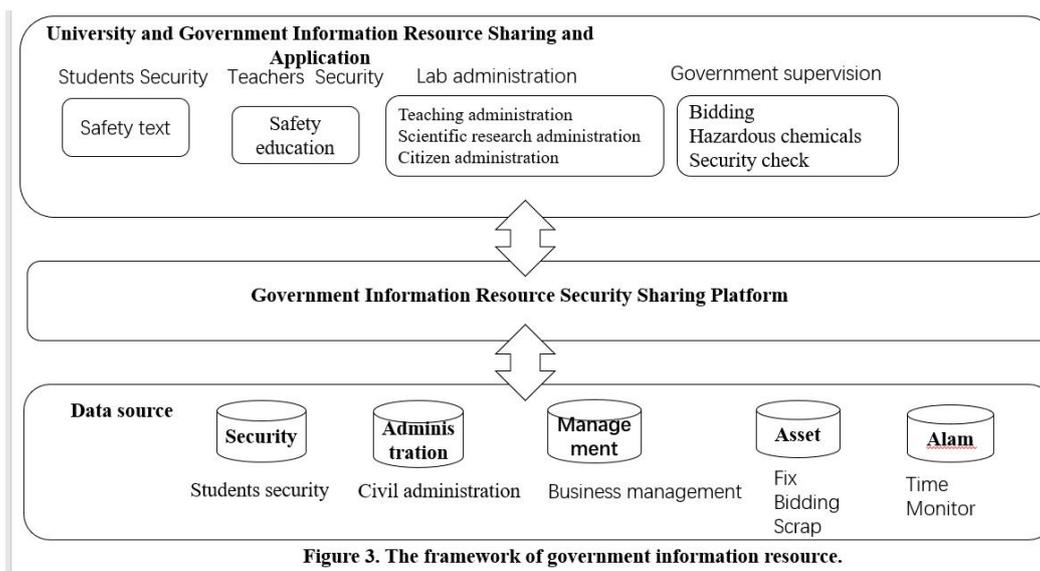


Figure 3. The framework of government information resource.

4. CONCLUSION

The objectives of this research included:(1) university laboratory management need improve by using DOSA platform and (2) refactoring workload proof and contribution value by using big data technology and blockchain technology. Further development is planned to research more deeper of university management and education by using DOSA platform.

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# Analysis of Inertial Navigation Technology

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**Abstract:** Inertial navigation is a comprehensive technology involving many disciplines and fields, such as precision machinery, computer technology, microelectronics, optics, automatic control, materials and so on. It expounds the principle and classification of inertial navigation technology, and summarizes the development and current situation of inertial navigation technology. Inertial navigation is the only completely autonomous navigation mode. The pure inertial navigation system that does not depend on any external information will still occupy a certain important position, and with the development of the times, it will become a more important and more valuable and meaningful research direction. With the continuous changes of market demand and advanced navigation technology, the market has become an important driving force for the continuous development and progress of modern navigation technology.

**Keywords:** Inertial navigation technology; Analysis

## INTRODUCTION

Inertial navigation is a cutting-edge technology integrating Electromechanical, Optics, Mathematics, Mechanics, Control, Computer and other disciplines. The continuous progress and development of this technology undoubtedly brings greater opportunities for the development of modern science and technology, and it is the result of the continuous development of the times and the continuous progress of science and technology. As the basic attribute of all mass bodies, inertia determines that inertial navigation technology is completely independent of external things and external information in the process of navigation. Its working environment is wide in any environment or any time period. It is not only limited to the ground, but also can play its role in the air and underwater, which determines that it has an incomparable absolute advantage over other navigation systems. This paper briefly analyzes the inertial navigation technology, and discusses and studies its classification, operation principle, significant weaknesses, development and current situation.

### 1. CLASSIFICATION OF INERTIAL NAVIGATION SYSTEM

Inertial navigation systems (INS) can be divided into two categories. The first type belongs to platform INS, which determines the navigation coordinate system based on the relevant platform coordinates provided by the real gyro stabilized platform. It can carry out accurate simulation to obtain the relevant

and required navigation data through this simulation. The second one belongs to strapdown INS. In this system, it is not played by the real entity platform, but by the digital platform realized by the computer.

### 2. OPERATION PRINCIPLE AND WEAKNESS ANALYSIS OF INS

The operating principle of inertial navigation is realized by Newton's theorem of mechanics. By measuring the acceleration of the carrier in the inertial reference system, integrating it with time, and transforming it into the navigation coordinate system, the information such as speed, yaw angle and position in the navigation coordinate system can be obtained. The INS belongs to the calculation navigation method, that is, the position of the next point is calculated from the position of a known point according to the continuously measured heading angle and speed of the moving body, so that the current position of the moving body can be continuously measured. The gyroscope in the INS is used to form a navigation coordinate system, so that the measurement axis of the accelerometer is stabilized in the coordinate system, and the heading and attitude angle are given; the accelerometer is used to measure the acceleration of the moving body, and the velocity can be obtained by integrating time, and the displacement can be obtained by integrating velocity with time. The INS integrates the accelerometers sensed in the east and north directions on the platform of the local horizontal coordinate system once and twice to obtain the east and north speed and position respectively. There are certain necessary conditions to achieve this goal: the navigation platform controlled by the gyro in the system can accurately track and present the local navigation coordinate system from the beginning to the end. Therefore, for INS, the gyro is an indispensable important device. In modern high-tech warfare, any single navigation system is difficult to meet the navigation requirements of various military vehicles [1]. INS is not perfect, and GPS navigation systems also have certain shortcomings, such as susceptibility to electronic interference, easy signal obstruction, and poor completeness. Combining the characteristics of long-term high-precision performance of GPS and short-term high-precision performance of INS can complement each other, and realize a more complete navigation application for practical development.

### 3. THE DEVELOPMENT AND STATUS QUO OF INS

The development of inertial systems relies on the

support of the development of three aspects of science and technology: new concept measurement principles and new inertial devices, advanced manufacturing technology, and computer technology [2]. The core device of INS is the inertial device, and how it progresses plays an indispensable and decisive role in the advancement of inertial navigation technology. There are two types of inertial devices, namely gyroscope and accelerometer. If the development level of the gyroscope is restricted, the development of inertial navigation technology will be restricted. The development level of manufacturing technology and computer technology has also strongly promoted the development of inertial navigation technology.

The engineering application of the rotor gyroscope mainly utilizes the fixed axis and precession of the gyroscope. In order to achieve a certain accuracy of gyroscope, it is necessary to improve the rotation speed of gyro rotor and ensure that the rotor rotates at a constant angular rate. In the 1880s, there was a major breakthrough in gyro technology. The use of a motor to drive the gyro rotor greatly improved the rotation speed and stability of the gyro rotor, and a gyro compass test device was created. After the technical problem of ensuring the constant rotational angular velocity of the rotor of the gyroscope was solved, the main way to improve the accuracy of the gyroscope was to reduce the interference torque along the gyroscope support, especially the friction torque. In the 1950s, the Drap Laboratory of the Massachusetts Institute of Technology in the United States adopted a liquid floating support, and successfully developed a single degree of freedom liquid floating gyro, which effectively reduced the frictional moment caused by the support, and made the gyro drift meet the inertial level requirements. In 1949, the Drap Laboratory successfully developed an inertial device named "Phoebe", which was installed on the B29 aircraft to complete a 10h long-distance fully automatic flight from Massachusetts to New Mexico. Although the system does not yet have the function of an inertial navigation system, it has laid the foundation for the development of an inertial navigation system.

In May 1950, Otonetix branch of North American Airlines successfully developed the first pure inertial navigation system XN-1 for the U.S. air force, and installed it on C47 aircraft for successful flight test. In order to adapt to navigation applications, XN-1 has

been appropriately modified to become N6 inertial navigation system. In July 1958, the U.S. Navy's Nautilus Nuclear Submarine carried out an exploratory voyage through the Arctic ice sheet. Equipped with a set of N6-A inertial navigation system and a set of MK-19 platform compass, the Nautilus Nuclear Submarine set out from Pearl Harbor, crossed the Arctic ice sheet and finally arrived at Portland port, England, which lasted 21 days. This success that shocked the world fully shows the unique advantages of INS different from other navigation systems, that is autonomy, concealment and information completeness [3].

With the development of the times and the continuous research and development of scientists and technicians, INS has achieved great development and progress in the last two decades of the 20th century. A large number of medium precision platform INS constructed by dynamically tuned gyroscopes have emerged. The most representative is the LTN-72 series inertial navigation system of American Lidon Company. It accounted for almost all orders for standard inertial navigation of civil aviation aircraft in the world at that time.

#### 4. CONCLUSION

The continuous development of inertial navigation obviously reflects the continuous progress of contemporary science and technology. It is the product of scientific and technological progress, and the reaction on science and technology can promote the continuous development of modern social civilization and science and technology. The completely autonomous characteristics of inertial navigation will promote its development to a deeper and further research direction. In the process of application, it still needs to give play to its advantages and avoid its shortcomings, and cooperate effectively with other navigation systems to contribute to modern development.

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# Discussion on the Value of Music Therapy in Improving Students' Mental Health

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**Abstract:** As an important method of traditional psychotherapy, music therapy plays an important role in regulating bad emotions, treating depression, eliminating interpersonal barriers and shaping healthy personality. However, at this stage, domestic colleges still face many practical bottlenecks in applying music therapy to students' mental health education, such as lack of rational cognition and a large gap of professional talents. In view of this, colleges should not only strengthen publicity and improve the cognition of teachers and students on music therapy, but also strengthen talent support and continue to promote the construction of music therapy talent team.

**Keywords:** Music therapy; Interpersonal communication; Personality shaping; Mental health.

## 1. INTRODUCTION

With the rapid transformation of the economic and social development mode and the continuous increase of competitive pressure, the mental health problems of college students have become more and more serious. The mental health of young college students is not only related to their personal future and destiny, but also to a large extent related to social stability and national construction. Therefore, colleges should adopt diversified methods to promote the physical and mental health of students. As an important means of psychological guidance, music therapy can help college students solve problems such as social anxiety and emotional depression, and lay the foundation for college students to grow up. Based on this, this paper deeply analyzes the important value of music therapy in improving students' mental health, and explores the difficulties and countermeasures of the application of music therapy in students' mental health education, in order to provide some theoretical reference for improving the application effect of music therapy.

## 2. OVERVIEW OF MUSIC THERAPY THEORY

As far as music therapy is concerned, people usually simply equate it with music appreciation. However, this is a misunderstanding of music therapy. In fact, as a more systematic intervention process, music therapy is mainly based on the methods and theories of psychotherapy, with the help of the psychological and physiological effects of music itself, and through various well-designed music behaviors, so as to eliminate the psychological obstacles of the treated

and improve the physical and mental health of the treated.

In the eyes of most people, if you feel sad, you can change your mood by enjoying happy music. But in fact, this will lead to depression to a certain extent. In essence, music therapy does not simply play relaxing and beautiful music to relieve the sorrow and pain of the person being treated. On the contrary, music therapy generally plays a large number of related music with anger, sadness and depression, so as to stimulate the treated person's positive emotional experience and guide them to gradually get rid of negative emotions. Specifically, when people's negative emotions accumulate to a certain extent, the positive emotional power in people's heart will show signs of rising. At this time, with the help of various positive music, music therapists will further strengthen the backlog of positive emotions in the heart of the patients seeking treatment, so as to guide them out of the realistic dilemma of extreme pain and sadness as soon as possible.

As a complete modern science, music therapy originated in the United States in the mid-20th century. Moreover, the United States is still the most developed country in the world for music therapy. According to relevant statistics from the Global Music Therapy Federation, a total of 45 countries in the world have begun to use music therapy, and 150 colleges and universities have carried out relevant teaching work on music therapy. In contrast, music therapy started late in China. It can be traced back to 1979. Professor Liu Bangrui, who is a Chinese-American in music therapy, went to the Central Conservatory of Music to participate in related lectures, bringing music therapy in Europe and the United States into China for the first time. Since then, China has carried out many innovative practical activities for music therapy, trying to integrate traditional Chinese medicine health care and music therapy.

Music therapy is also called music medicine, which is essentially a borderline cross-discipline that combines music, psychology and medical treatment. But at present, academics and industry experts have not yet formed a unified definition of music therapy. Based on the views of relevant experts and scholars, this paper holds that music therapy refers to the evaluation of personal physical and mental health, cognitive ability and emotional status through music

response, and the use of receptive listening and music performance to improve the mental health of the patients according to the actual needs of the patients.

### 3. THE IMPORTANT VALUE OF MUSIC THERAPY IN IMPROVING STUDENTS' MENTAL HEALTH

#### 3.1 It is helpful to eliminate students' interpersonal barriers

At this stage, due to the lack of interpersonal experience and skills, some college students are difficult to establish a correct relationship with the outside world and can not effectively deal with the interpersonal relationship with teachers and classmates. Even a few students have social phobia disorder, which leads to relatively indifferent interpersonal relationships. In view of this, through the method of music therapy, we can carry out psychological counseling for college students with self-expression disorder, help them eliminate interpersonal barriers and further enhance interpersonal communication. On the one hand, music has the functional advantages of regulating emotion and relieving psychology, which can create a good atmosphere to increase the sense of closeness, help students eliminate the tension in the process of interpersonal communication, and promote the majority of young students to open their inner world. College educators take music as a carrier to promote communication and plan all kinds of music activities, which will help students alleviate the problems caused by social avoidance and strengthen students' social communication ability. On the other hand, as an extremely important nonverbal communication tool, music can build a bridge between the music therapist and the treated, and help the healer better integrate into the treatment process. Young college students take music as an important medium for self-expression, which can not only vent their personal emotions, but also obtain positive emotional experience in diversified music activities. In addition, as a typical group activity, music activity is essentially a kind of social communication, mainly including song and dance performance and chorus. By participating in various music activities, college students can exchange personal ideas and opinions with each other and constantly enhance their adaptability to social activities. To sum up, music therapy plays a vital role in improving students' interpersonal relationship and social communication ability.

3.2 It is helpful to treat depression of college students. According to relevant statistics, the number of patients with depression in China is as high as 350 million, accounting for more than 20% of the total population. It is noteworthy that college students have gradually become the depression group with the highest proportion in China, accounting for about 25%. The main reasons are as follows: First, some introverted college students are unable to correctly

handle interpersonal relationships and cannot coexist harmoniously with classmates and teachers. The second is that excessive curriculum and employment pressure will bring great psychological pressure to students to a certain extent, leading to a sharp increase in the number of depression among college students. By playing music for college students, music therapy can effectively dredge college students' emotions and make them infected by the atmosphere created by music melody, which is helpful to prevent and treat college students' depression. Specifically, the core mechanism of music therapy is to act the regular frequency changes of sound waves on the students' cerebral cortex, have a positive effect on the hypothalamus and limbic system, use the music melody to regulate the students' metabolism and hormone secretion, and ultimately change students' physical function state and emotional experience.

3.3 It is helpful to shape students' healthy personality. As far as personality is concerned, its concept refers to the organic combination of human thought, temperament and behavior. As an important embodiment of good mental health standards, healthy personality is not only the basis for the growth of college students, but also the basic requirements of economic and social development for young college students. In the long run, shaping college students' healthy personality is of great significance to cultivate humanistic spirit and maintain campus stability. Music therapy plays a key role in improving students' personality and cultivating students' temperament. Students' harmonic singing in music chorus activities can bring unusual emotional experience to singers and listeners, and make them really feel the shock and touch brought by music in their hearts, which will help positively affect the cognitive concept of college students and constantly improve their personality system. Generally speaking, music works of different styles and forms can not only cultivate sentiment and improve students' aesthetic ability, but also help young college students shape healthy personality.

#### 3.4 It is helpful to regulate the bad mood of college students

As people's first motivation system, emotion plays a decisive role in people's cognitive direction. However, because the outlook on life and values have not been fully formed, some college students are prone to emotional instability in their work and life. If it is not adjusted properly, it will easily lead to students being troubled by various emotions and even psychological diseases. In view of this reality, college educators need to use music therapy and other methods to help college students reasonably adjust their bad emotions, alleviate their academic and employment pressure, and then realize the purpose of students' physical and mental health development. In-depth analysis, music can have a more significant impact on people's psychological activities and emotions to a large

extent. This is mainly because music is not only the external manifestation of human psychological activities, but also the true expression of people's inner emotions. Through music therapy, college educators can make use of the great influence of music on students' emotions, gradually change students' negative mentality and fully stimulate their positive emotional state in their hearts, so as to alleviate students' pressure and strengthen students' emotional regulation.

#### 4. THE REALISTIC DILEMMA OF MUSIC THERAPY APPLIED IN STUDENTS' MENTAL HEALTH EDUCATION

##### 4.1 Teachers and students lack rational cognition of music therapy

According to the relevant survey data, among the 250 college students participating in the survey, only 32% were willing to accept music therapy when asked whether they were willing to accept music therapy when they had mental health problems. To some extent, the survey data reflect that many young college students lack the necessary understanding and cognition of music therapy due to the insufficient publicity of music therapy in colleges and universities. Usually, college students generally equate music therapy with music education. In the view of most college students, music therapy refers to the purpose of relieving stress and relaxing by enjoying music works. From a global perspective, the problem of lack of rational understanding of music therapy is more common. Even in the United States, which is the most advanced in the field of music therapy, some groups have low cognition of music therapy. This problem is more prominent in China. It is not only the lack of in-depth understanding of music therapy by young college students, but also many people in the society who know little about music therapy. To this end, colleges and universities should strengthen the publicity of music therapy and improve contemporary college students' cognition of music therapy.

##### 4.2 There is a large gap of professionals

In recent years, music therapy has shown a rapid development trend in China, which promotes the continuous expansion of talent market demand. However, as far as the actual situation is concerned, only 11 colleges and universities such as Sichuan Conservatory of Music and Central Conservatory of Music have set up music therapy specialty in China, which leads to the shortage of music therapy professionals transported by colleges and universities, which is difficult to fully meet the actual needs. Facing the gap between supply and demand, a large number of various music therapy institutions have sprung up, but the above-mentioned institutions have mixed good and bad phenomena. Some personnel who only receive short-term training do not have the professional skills and literacy of music therapists. As far as domestic colleges and universities are

concerned, the number of teachers with music therapist qualification certificates is relatively limited, and some teachers still have great room for improvement in many aspects such as professionalism and teaching methods. Music therapy mainly includes three categories: reconstructive music therapy, re-educational music therapy and supportive music therapy. However, at present, college teachers usually use supportive music therapy in the process of promoting the physical and mental health of students. The limited teaching time and the monotonous treatment based on emotional communication have caused the actual therapeutic effect to be insignificant. How to improve teachers' professional ability and build a talent team for music therapy has become an important issue facing colleges.

#### 5. STRATEGY ANALYSIS OF MUSIC THERAPY APPLIED IN STUDENTS' MENTAL HEALTH EDUCATION

##### 5.1 Strengthen publicity and improve the cognition of teachers and students on music therapy

On the one hand, colleges should fully integrate all kinds of educational resources to provide resource support for promoting the effective development of music therapy. Although there are great differences between music therapy and music education, music education can become an important channel to strengthen the publicity of music therapy. Therefore, mental health education staff should strengthen communication with music educators, help college students fully understand the important value of music in improving mental health, and further improve the majority of students' identity with music therapy. In addition, colleges should make maximum use of mental health education network resources, not only improve the knowledge popularization plate to explain the relationship between music and psychology for young college students, but also improve the music therapy plate to deepen students' understanding of music therapy through various cases related to music therapy. On the other hand, colleges should promote the construction of campus culture and create an external environment conducive to the application of music therapy in students' mental health education. There is no doubt that campus culture has an important impact on young college students. Therefore, colleges should give full play to the role of campus culture in the promotion and application of music therapy. Colleges should play their leading role, encourage and support college students to establish music learning and exchange organizations, vigorously create a good campus music atmosphere through planning diversified music theme activities such as concerts, and continuously improve the music feeling ability and appreciation level of young college students, so as to lay a solid foundation for improving the application effect of music therapy.

## 5.2 Strengthen talent support and continue to promote the construction of music therapy talent team

As an effective guarantee to improve the application effect of music therapy, talent team is an important foundation to promote the deep integration of music therapy and students' mental health education. In view of this, colleges and universities should gradually pay more attention to the construction of music therapy talent team. The specific practical level can be carried out in the following aspects: on the one hand, the implementation subject of music therapy should constantly enrich their own music theory knowledge and psychological knowledge, and systematically learn the basic methods of psychology and the theoretical knowledge of psychological counseling. Moreover, the implementation subject of music therapy needs to correctly understand the relationship between music and psychological guidance, so as to further improve the pertinence of music therapy. On the other hand, the implementers of music therapy should strive to improve their professional ethics and actively help college students solve all kinds of psychological problems, so as to promote the growth of young college students. As for the specific implementation path of the construction of music therapy talent team, domestic colleges should continue to improve the incentive mechanism, encourage the implementation subjects of music therapy to strengthen the study of professional knowledge and obtain relevant certificates, and guide relevant workers to master the necessary mental

health education skills. At the same time, colleges should provide more opportunities for further study and training for the implementation subjects of music therapy, and promote the professional development of talent team of music therapy and mental health education. In addition, colleges can attract a group of high-end talents in the field of music therapy through talent recruitment and introduction, and share the application experience of music therapy by strengthening communication among music therapists.

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# The Spread of Tibetan Buddhism in Europe and the Adaptive Changes

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**Abstract** In the 1960s and 1970s, Tibetan Buddhism spread and developed rapidly in Europe. In this process, Tibetan Buddhism encountered the "European Secularity" described by religious sociologists, so it had to adjust its way of existence and a series of adaptive changes took place. Taking the Kargyu in Belgium as an example, the paper analyzes the spread and adaptive changes of Tibetan Buddhism in Europe.

**Keywords:** Tibetan Buddhism; European communication; adaptive change

## 1. RAISING QUESTIONS

In the theoretical discussion on religious modernization, the secularization theory is considered to be the result of establishing and extrapolating it according to the European situation, which has rarely been mentioned. It refers to the gradual retreat of religion from its ubiquitous position in real life to a relatively independent religious field, and the gradual removal of ritual behavior and religious color in many aspects of life. This paper hopes to expand the understanding of "European Secularity" through the study of the spread of Tibetan Buddhism in Europe.

The article mainly focuses on the Tibetan Buddhist Center of Kargyu in Belgium, focusing on the development history, religious facilities and operational mode of Tibetan Buddhist institutions, as well as the forms of beliefs and religious practices of European believers and Tibetans living in Europe. In addition, based on combing and grasping the history and current situation of the spread of Tibetan Buddhism in Europe, this paper will focus on the basic characteristics of the adaptive changes of Tibetan Buddhism in the European cultural background, so as to discuss the spread of contemporary Tibetan Buddhism in Europe.

## 2. SPREAD OF TIBETAN BUDDHISM IN EUROPE

Since the colonial era, Buddhist thought has come into people's perspective with Europeans. At the end of the 19th century and the beginning of the 20th century, some influential Asian Buddhists came to Europe for cross-cultural communication. They put forward the western concept of Buddhism under the background of European language and culture. The cultural contact of early ages between Asian Buddhists and Westerners had a profound impact on the basic concepts of Buddhism in Europe.

At the beginning of the 20th century, Buddhism

formed a religious tradition emphasizing personal experience in Europe, which really became a "world religion". Although Buddhism has begun to take root in Europe, its development level is still limited because there is no large-scale Asian immigrants that will be seen later.

In the 1960s, several important Tibetan Buddhist monks arrived in Europe and had many European followers and believers in the 1970s. Tibetan Buddhist monks came to Europe and used various ways to make Tibetan Buddhism take root in local society, mainly including the establishment of meditation centers, the establishment of monasteries following the tradition, the establishment of colleges with the nature of both practice and research, the establishment of publishing houses, and so on. Among them, setting up a retreat center or meditation center is not only a means with the greatest influence and most suitable for western society, but also the most commonly used way. The retreat center provides a clean place for western believers to attract westerners with simple teachings and their own meditation practice. And this is a method that has proved to be feasible by practice.

## 3. ANALYSIS OF THE ADAPTIVE CHANGES OF TIBETAN BUDDHISM IN EUROPE

On weekdays, most Tibetans hold ceremonies at home, while most European Buddhists mainly focus on carrying out meditation practice and receiving Buddhist teaching, and rarely resort to what they think is mystical ritual behavior. It can be seen that in the process of cultural adaptation to European society, Tibetan Buddhism clearly shows the change process of separation, collision and exchange between the belief cultures, and shows the following characteristics.

### 3.1 Localization of religious institutions

Although Tibetan Buddhism was introduced into Europe earlier, it is far from developing so rapidly in the United States. Under the secular religious and cultural ecology in Europe, Tibetan Buddhism needs a more effective way of localization if it wants to take root in European society.

During the spread and development of Tibetan Buddhism in Europe, the retreat center is the most common form of existence. Many meditation centers are organized or established by Tibetan Buddhist monks living in Europe. These monks are often appointed by Tibetan Buddhist temples in South Asia to establish meditation institutions for spreading

Buddhism. Later, in the exploration and attempt, many Tibetan Buddhist centers have gradually changed from presided over by monks to being operated by Europeans, then gradually formed an institutionalized operation mechanism. Also, the process of gradual change clearly reflects the localization characteristics of Tibetan Buddhism in Europe.

### 3.2 Localization of the religious landscape

In Tibetan inhabited areas of China, Tibetan Buddhist temples have the characteristics of the territorial embedding. After entering the modern era, the temple was separated from the local politics, but it still maintained close contact with the Tibetan community and played an important role in the local social structure. When Tibetan Buddhism entered Europe as an "outsider", due to the loss of regional support, the foundation of temple organization is no longer solid, and it has to face the transformation of its form of existence.

Compared with traditional Tibetan Buddhist monasteries, the basic functions of the European retreat center have changed greatly, mainly including spreading Tibetan Buddhist culture, carrying out social charity activities, supporting scientific research in the field of Tibetan and Buddhism, providing ritual places, etc. Although these meditation centers have traditional Tibetan Buddhist temples, they are rarely used by monks to chant scriptures and worship Buddha and hold Dharma meetings. Moreover, in fact, most of these temples do not have resident monks.

Although the religious sites of the retreat center no longer undertake the traditional functions of the temple due to the lack of resident monks, they also basically retain the main facilities, religious objects and cultural symbols of Tibetan Buddhism. Believers in Europe will practice Buddhism on the basis of accepting the traditional system of symbol of Tibetan Buddhism, and can also enjoy the services provided by modern facilities. Tibetans living in Europe rarely enter these temples on weekdays, and only carry out small activities of ceremony in the sutra hall at home. However, many Tibetans also gather in these temples to celebrate important religious festivals, especially during the Tibetan New Year. Because institutions and believers can not establish a lasting supply and delivery relationship in the traditional sense, these Tibetan Buddhist temples have undergone a local transformation, which has been incorporated into the religious market as religious facilities of service.

### 3.3 Marketization of institutional operation

Religious marketization is an important feature of religions all over the world in the process of modernization transformation and development. Tibetan Buddhist centers in Europe participate in the fierce competition in the European religious market and carry out various forms of activities to attract believers or tourists.

In addition, they spread the dharma in the form of

paid teaching and paid visits, as well as the accommodation and meal fees charged for receiving visitors, the operating profits of stores opened by local branches and people's cash donations, which would constitute the main source of funds of the organization. But at the same time, the cost of organizing various religious activities is also huge, which has also caused great economic pressure on institutions. The operation of the European Tibetan Buddhist Center basically follows the logic of the market. The operation of the organization also affects the breadth and depth of the spread and development of Tibetan Buddhism in Europe.

What's more, the religious life of European believers also has the characteristics of consumerism. They buy religious services in order to continuously improve their quality of life and enrich and improve their daily life. Under this market-oriented religious model, the subjectivity of believers has been greatly improved. They take Buddhist thought and practice as cultural resources for self-improvement. While practicing the faith life of Tibetan Buddhism, they also strengthen their inherent individualism spirit. The spread of Tibetan Buddhism in Europe is essentially a process of mutual integration of Buddhist ideas and Western cultural values.

### 3.4 Embodiment and practicality of European believer's belief mode

European believers rarely read scriptures and are not very interested in the rituals of Tibetan Buddhism. Generally, they only participate in meditation or yoga, and resort to embodied religious practice for the purpose of self-improvement. Many practitioners look for beneficial aspects of meditation. They are interested in how meditation can solve their daily problems and difficulties, so as to have a positive impact.

Besides, European believers emphasize that the root of embodied practice lies in their practical orientation towards Buddhism. Buddhism is mainly regarded by many Europeans as a practical means to reduce the level of personal pain, rather than a highly complex and heterogeneous cultural phenomenon. In various forms of Tibetan Buddhist centers in Europe, although there are many European monks who become monks and hold precepts, most members do not give up their status as "laymen" and still maintain the identity of original society. Most of them are more or less looking for ways to integrate Buddhist teachings and practice into their secular daily life.

### 3.5 Secularization of Tibetan religious behavior in Europe

The temple has gradually transformed into a place for spreading Tibetan Buddhist culture and carrying out Tibetan and Buddhist research. In this sense, the basic functions of these monasteries, as well as the religious behavior of the Tibetan monks to which the monasteries belong, gradually show the characteristics of worldly vulgarization.

Compared with the monks sent to Europe, ordinary Tibetans living in Europe mainly aim at economic interests rather than political behavior. When they come to Europe, they tend to continue their original Tibetan Buddhist beliefs. However, they are busy making a living in new social environment and have no time to participate in religious activities regularly. In addition, the resettlement area does not have a strong religious and cultural environment and traditional organization, so it is difficult to form a stable supply and delivery relationship in the traditional sense. Therefore, religious behavior is greatly reduced, and belief life is also weakened. Tibetans living in Europe work hard on weekdays. Only during important religious festivals will they gather in temples, hold celebrations in rented spaces such as hotels and schools, and even carry out religious practice in the virtual space built by the network in many cases. Their religious behavior and ritual activities would be becoming more and more simplified, the impact of religious order on their personal life is gradually weakened, and even many people's religious consciousness and religious emotion are gradually weakened. Generally speaking, the religious behavior of Tibetans living in Europe clearly shows the characteristics of worldly vulgarization.

#### 4. CONCLUSION

In fact, the various changes of Tibetan Buddhism in Europe are closely related to the European religious

and cultural ecology, with "secularization" as the core feature. Its believers tend to pursue spiritual experience and improve their physical and mental health through meditation practice, but they may not admit that they belong to this religion. Tibetans living in Europe practiced the life of traditional belief in a relatively isolated way, and did not have a dominant impact on the change process of Tibetan Buddhism in Europe. In this case, Tibetan Buddhism in Europe is gradually embedded in the local market and competes for the believer market together with other religious forms.

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# Research on the Rise and Fall of Modern Beijing Library Association

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**Abstract:** As the earliest library association in modern China, Beijing (Peking) Library Association (BLA) has experienced four times of rise and fall in just a few decades. Through sorting and analysis of historical data, we can see that the reasons for the rise and development of BLA can't be separated from the realistic demand of library, the relatively loose cultural environment and the strong support of the National Peking Library. On the contrary, the reasons of BLA's weakness and stagnation were closely related to the shortage of funds, the political pressure in a specific period and the cause impact brought by the establishment of Chinese Library Association (CLA) in Beijing.

**Keywords:** Modern; Beijing (Peking) Library Association; Rise and Fall; Cause

## INTRODUCTION

As the earliest library association in modern China, Beijing (Peking) Library Association (BLA) has experienced four ups and downs in just a few decades. In 1918-1919, BLA existed for a brief period before being disbanded because the Beijing government refused to record it. In 1924, BLA was successfully rebuilt, but gradually stopped working in the following years due to political, economic and cultural constraints. In 1928, BLA was renamed Peking Library Association, and the committee system replaced the president system, which successfully realized the reorganization. For the next ten years, BLA developed smoothly. In 1937, Peking fell to the enemy, and the work of BLA came to a standstill. After the victory of the Anti-Japanese War, BLA reorganized. However, the good times did not last long. With the development of the Liberation War, BLA eventually died out. At present, there were few academic studies on BLA, and most of them focus on the discussion of the reconstruction in 1924. Therefore, based on the local historical materials, this paper aims to systematically analyze the reasons for rise and fall of BLA.

## 1. REASONS FOR RISE AND DEVELOPMENT

### 1.1 Practical Needs of Library Construction

In the early years of the Republic of China, the number and scale of libraries in Beijing area were continuously expanding. People with insight realized that it was urgent to set up an industry association to coordinate and promote library work. In 1918, Huiwen University Library called on the Beijing counterparts to unite and set up library association in

order to promote the "communication among libraries in Beijing". In 1924, the China Education Improvement Association accepted Dai Zhi-qian's proposal and formally rebuilt BLA, with the aim of seeking "mutual benefit among libraries in Beijing" and "the perfection of libraries". Later, when was reorganized in 1928, BLA stated that its purpose was to promote inter-library mutual assistance, improve library cause and promote communication among members. Thus, it can be seen that the practical need of library construction in Beijing area during the Republic of China was the fundamental reason for the many times establishments of BLA.

As for the specific details of the real needs, Dai Zhi-qian, who presided over the reconstruction of BLA, has made in-depth comments. Dai pointed out that modern Chinese libraries were independent of each other and lack of contact, so the corresponding activities of reading books and library management were hard to get. Therefore, various libraries should organize trade associations to save money and cooperate. In this way, the regional book types can be increased without increasing funds, so as to realize the efficient use of public book resources. At that time, the library undertaking in China was in the primary stage, and there was little interaction among librarians. Therefore, Dai called on librarians to unite with each other and form a special association so as to enhance mutual trust and help each other and enhance their research capabilities.

### 1.2 Relatively Relaxed Cultural Environment

The period of 1928-1929 (the beginning of the reorganization) was a peak in the development of BLA. As for the cause of this development peak, BLA made it clear in its journal that it was mainly due to the relatively free and loose cultural environment after the National Government took over Peking. Take the press as an example. In 1928, after the Nationalist Government took over Peking, it sent Jiang Zuo-bin, a representative, to entertain the press in Peking and declare the political views of the National Government. At the banquet, the newspaper people of Peking made a request to Jiang Zuo-bin, "Please give full development to the press, do not ask the press to be unified", "must be exempt from all strictures of Feng-xi warlord", eradicate warlords and bureaucrats and so on. In addition, the Peking press jointly submitted an official letter to the National Government, stating "the situation of the warlord's oppression of speech", and requesting the

termination of the newspaper censorship system. Soon after, the National Government, based on the initial decision that North China has just been pacified and the consideration of political reform, believed that "the people's legitimate freedom of speech should be restored as soon as possible", so it explicitly ordered to cancel the censorship system of newspapers and implemented a relatively loose cultural policy in Peking. It was against this historical background that BLA was able to reorganize and develop rapidly in a short period of time.

### 1.3 Support from National Peking Library

Because of the perennial shortage of library funds during the period of Republic of China, stable and enough financial support was very important for the development of library organization. In the 1920s and 1930s, the United States gradually implemented the refund to China from the Boxer Indemnity. In Peking, National Peking Library was the key target of this fund. From 1927 to 1945, the library received a total of six million yuan, which was the most powerful large library in Peking. As a core member of BLA, it was reasonable for the National Peking Library to provide appropriate funds to support BLA. It happened that other small and medium-sized libraries had limited funds, so the funding source of BLA changed from "assumed by all libraries" to relying mainly on the support of the National Peking Library. In addition, the large number of staff members of the National Peking Library joining BLA also shows the library's long-term and firm support to BLA in terms of manpower, cause and technology and so on.

## 2. CAUSES OF WEAKNESS AND STAGNATION

### 2.1 Shortage of Funds

According to the historical data, BLA were three sources of funds, namely, the financial support from the National Peking Library, membership dues, and half of the expenses saved by organizing members to jointly purchase books. Since the savings from joint book purchases were mostly temporary in nature, the economic effect was limited. In the 1920s, BLA mainly relied on membership dues and "temporary fees", but in the 1930s, BLA gradually relied on the National Peking Library for funding. The reasons were closely related to the shortage of funds in the library industry and the generous subsidy of National Peking Library. In 1933, the second annual conference of CLA was founded in Peking. Many library groups and social groups donated money to support the conference. However, although BLA was located in Peking, it did not provide "preparatory fund" support, which shows insufficient fund of BLA.

### 2.2 Political Reasons

In 1924, BLA's cause and daily work came to a standstill. The principal cause was political cause. During the Beijing Government period, popular movements and student movements were common. For example, in January 1926, people and students in Beijing organized anti-Japanese demonstrations.

During the rally, some people put up flags attacking the government and shouted slogans such as "Long live the national revolution". In this atmosphere, the government was dissatisfied with the popular movement. Therefore, after taking over the Beijing Government, Feng-xi warlord gradually strengthened its control over the ideological and cultural fields. It was recorded that under Feng-xi warlord's rule, "people's freedom of assembly, association and speech was deprived". In addition, Feng-xi warlord also rigorously cracked down on student movement and caused tragedies in northern China by means of "extremely cruel treatment, detention and shooting at every turn", such as the "Beijing Massacre" on March 18, 1923 and "arresting and killing 24 students" in 1927. In order to strengthen ideological control and maintain the realistic rule, Feng-xi warlord even broke diplomatic conventions in April 1927 and went straight to the Soviet Embassy in China to arrest more than 20 Kuomintang (KMT) and Communist party members, including Li Da-zhao. Soon after, Li and other revolutionaries were executed. Look from the identity, although Li resigned the position of Beijing university library in December 1922, and no longer participate in affairs of BLA, but due to Feng-xi warlord treat new intellectuals with a high degree of suspicion for a long time, therefore, BLA — Li used to belong to, was limited and interfered naturally. In 1928, the Nationalist Government completed second phase of Northern Expedition, entered Beijing and changed Beijing into Peking. Meanwhile, the committee system has been reorganized in BLA. In 1937, the July 7 Incident broke out, which started the comprehensive confrontation between China and Japan in political, military and other aspects. On account of the fall of Peking, the members of BLA were scattered, and BLA was forced to stop its activities during the total Anti-Japanese War. After the victory of the Anti-Japanese War, BLA reorganized, and carried out the work of recycling lost books, establishing public libraries, expanding primary and middle school libraries and producing book rules. A few years later, with the development of the War of Liberation and the change of the domestic political situation, BLA vanished finally.

### 2.3 Impact of CLA

From the perspective of industry influence and staff part-time work, the birth and long-term existence of CLA in Beijing has brought significant cause impact and practical influence to the former leading organization--BLA. In 1925, CLA was formally established in Beijing. Subsequently, many key members of BLA devoted themselves to the work of CLA and the Journal of CLA. Take Dai Zhi-qian and Yuan Tong-li for examples. After establishment of CLA, Dai Zhi-qian served as the director of the Executive Department of BLA, and Yuan Tong-li also served as the secretary. Since then, both of them have long held key leadership posts in CLA. As key

members of BLA held multiple positions, daily cause of BLA was "slowed down". Additionally, due to financial constraints and poor living conditions, the regular monthly meetings of BLA were suspended for more than a year. The journal of BLA was also suspended for several years after the first issue was published in 1924, and was reissued in 1929 after BLA had been reorganized.

### 3. CONCLUSION

As the earliest library association in modern China, BLA has experienced four times of rise and fall in just a few decades. Through sorting and analysis of historical data, we can see that the reasons for the rise and development of BLA can't be separated from the realistic demand of library, the relatively loose cultural environment and the strong support of the National Peiping library. On the contrary, the reasons of BLA's weakness and stagnation were closely related to the shortage of funds, the political pressure in a specific period and the business impact brought by the establishment of CLA in Beijing. To sum up, BLA occupied an important historical position in Chinese history.

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# Analysis on the Application of Mobile Live in Media Transformation

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**Abstract:** Propagation mode is undergoing great changes due to the rapid development of mobile live. This change will certainly change the existing news production. In this case, the traditional media how to effectively use mobile live technology to accelerate the media transformation is a question worth thinking about. This article aims to explore how the traditional media should use their existing strengths to build high-level mobile live platform and achieve transformation of the media. This paper not only analyzes the current situation of mobile live, but also study the media instances which have begun to try mobile live. The conclusions of this research suggest that mobile live plays an important role in media transformation.

**Keywords :** Mobile live ; media transformation ; information dissemination

## 1. INTRODUCTION

2016 is called the first year of mobile live, all kinds of live platforms have appeared. The number of users of the mobile live has increased dramatically. "Host", "Internet star" has become the most popular vocabulary. Until 2021, wecast is still hot. For the traditional media, how to make good use of their media influence and the mobile live platform to successfully complete the media transformation has become a problem need to think about. Nowadays, many traditional media have begun to try mobile live. With the popularity of mobile live, it can increase the coverage of news reports. This is of great significance to accelerating the development of media convergence. But there are few studies on mobile live at present. So this study is very valuable.

## 2. MOBILE LIVE IN NEW MEDIA CONTEXT

Mobile live broadcasting is mainly completed on mobile terminals such as mobile phones and tablets. It breaks the physical gap between time and space. Create a virtual "presence" for users through real-time shared video scenes, and provide it with an immersive viewing experience. [1] With the development of smart phones, live video gradually from the PC side to the mobile side. With the help of mobile devices, news, information, and even personal life can live on the Internet. New communication technologies and equipment have not only changed the form of news coverage, but also changed the way in which the public can access information. Mobile

live has no high requirements for equipment and technology. And the content is not limited to major news events. A smart phone will be able to replace the past live broadcast vehicles. This is undoubtedly more convenient for the media. And different from the past, the mobile live also requires a strong interaction. If the media is just show the text of the news content through live, it can only be said to be a failure broadcast. Its form is no longer the traditional "journalists broadcast news, the audience see the news", but through the host and the viewer's interaction to make the audience closer to the live content. This increases the proximity of the news.

## 3. THE IMPORTANCE OF MOBILE LIVE FOR MEDIA TRANSFORMATION

Since the new media began to shine, the transformation of traditional media has become a frequently mentioned topic. From Weibo, Wechat, APP, and now to the mobile live, traditional media seems to have been trying to catch up with the pace of new media. The vigorous development of social media make it possible for everyone to be the producer and messenger of content. For the traditional media, this may not be a bad thing. Compared with the traditional mode of news production, the emergence of new media help traditional media to remove the shackles of the channel and get the freedom to produce news anytime, anywhere. With high-quality content and live technology, traditional media may be able to find a breakthrough in the transformation.

Maybe traditional media can beyond new media one day.

Therefore, it's very important for the traditional media to enter the mobile live field. With its professional content production capacity, coupled with a huge flow of live streaming platform and real-time interaction to create a "sense of line", the traditional media may be able to add new vitality.

## 4. MEDIA MOBILE LIVE PLATFORM

The diversity of the platform and its own large number of users make mobile live become very convenient. In addition, some media will use their existing Apps to focus on the development of mobile live capabilities. For example, the People's Daily, the surging news, CCTV news. There are some media groups even launch their own live Apps, such as the South media, live mango, look at the East and so on. These phenomena show that compared with the past, the traditional media awareness of the channel

was strengthened, began to vigorously seize the mobile end of the entrance.

Take iFeng.com for example, its new brand "the wind live" on the line soon has achieved impressive results. At the beginning of the live, "the wind live" has reached 2 million views. With the powerful resources of iFeng.com, "the wind live" integrated the original content of multi-channel. At the same time, its cooperation with multiple official sources of news including the Xinhua News Agency. Besides, "the wind live" also encourages the self-media to join the production of live content in order to increase the depth of the entire platform. These are the other live platform does not have.

#### 5. MEDIA MOBILE LIVE TYPE

With the platform, broadcast what is also a very important issue. Mobile Internet live itself is very different from the traditional live television. With mobile live technology, live content also needs to be adjusted accordingly. In other words, this is the traditional media in transition how to find the entry point problem.

##### 5.1 Major events or thematic live

For major news events or thematic, the media will often send a few reporters to do good news. Many media have adopted live or even VR technology in this year's major news events, which make audience surprised.

In celebrating the 95th anniversary of the founding of the Chinese Communist Party, CCTV.com launched a large mobile live coverage "Road: Looking back 1921" for the first time. This report used "mobile video multi-point live + time and space cross-talk + VCR video", sent 12 live reporters led the audience into 12 historical key locations. It is hard to believe that this so important large-scale live broadcast only use 12 smart phones to complete. Compared with the past, today's mobile live is no doubt very convenient. Mobile live technology is becoming more and more popular in such major news reports. Because compared with the traditional mode of reporting, mobile live make the relationship between audience and news closer.

##### 5.2 Breaking news live

Mobile live seems to be the most suitable form for breaking news. Because this type of news is often sudden, uncertain, but also a high degree of concern. Once breaking news happened, the reporter did not have much time to prepare. Mobile live on the technology and equipment requirements are very low, as long as there is a mobile phone and the network can start broadcasting. For the audience away from the news site, through the webcast can quickly and clearly understand the progress of the event. It's intuitive than many other forms.

Mobile live broadcasting can effectively stimulate the communication between the anchor and the audience, the emotion of the audience can arouse emotional resonance. [2] No one knows what's going

to happen in the next second in a breaking news live. This uncertainty makes the outcome of the event uncontrollable. Concerned viewers can track live events in real-time live and view comments in the form of messages. What can be expected is that mobile live will have a more extensive application in the future.

#### 6. HOW TRADITIONAL MEDIA TRANSFORMS WITH MOBILE LIVE

Xi Jinping has pointed out that to promote the integration of traditional media and new media development, we must follow the rules of the news media and the development of new media, strengthen the Internet thinking, adhere to the traditional media and new media complementary, integrated development. Xi Jinping in the party's press and public opinion work forum further stressed that with the development of the situation, the party's news and media work must be innovative ideas, content, genres, methods, means, formats, mechanisms, enhance relevance and effectiveness; To adapt to the trend of differentiation, We must speed up the construction of public opinion to guide the new pattern. [3]

Traditional media will face many pressure in the use of mobile live technology, but the opportunity is also coexist with the pressure. Harold Innis believes that "A new media strengths will result in a new civilization." Indeed, changes in the media often lead to changes in the media industry. The traditional media want to be successful transition must rely on the power of mobile live.

##### 6.1 Return to the media properties of the live

Although the mobile live recently began to develop rapidly, but in fact, it has always been a kind of content-specific production methods over the years. But this form of media subject to specific technical conditions before, it can not be large-scale promotion and popularization. Nowadays with mobile Internet technology, so everyone can use live. But it's very necessary for live to return to its nature, that is, its media properties.

Mobile live make a group of Internet stars famous. But when their content began to same, the value of professional media began to gradually come out. Professional lens, high-quality content, these are something Internet stars don't have. In the content production system, it is these characteristics that have the strongest continuity.

##### 6.2 Let content greater than form

For the current mobile live platform, the form is greater than the content, the platform property is greater than the media properties. Because it does not have the ability to carry out high-quality topics of planning, resulting in vulgar content and extremely lack of innovation.

"Internet era, the authority of the traditional mainstream media and credibility still exists. To clarify their own position, from the 'information newspaper' to 'thought newspaper'." Talking about the

transformation path of traditional media, Fudan University journalism professor Li Liangrong suggest.Traditional media has a professional and strong credibility of the media congenital advantage.This is the live platform "everyone can do host" can not match.Even in the new media era that "everyone has a microphone" ,valuable information production is still highly dependent on professionals."Content is king" will not become obsolete at any time. In the live platform still need high-quality content to attract the attention of users.

### 6.3 Focus on a particular area

A senior financial reporter said.The professional field of mobile live is more likely to develop into the knowledge Internet star's incubator.And ultimately be able to establish a new live mode like "attract users+ fans operating interactive live + income realized" .[4] The media should actively explore the combination of live and different areas to play out more possibilities.Live + financial, live + public, live + sports ... ..Let live into more professional areas to provide unique, professional quality content.The combination of mobile live broadcasting system and conventional social media platform can bring more social attributes to mobile live broadcasting and expand the platform to the in-depth field.[5]The same content is unable to retain the user.Traditional media in the development of live platform should focus on improving innovation, towards individuality, interactive development.

### 7.CONCLUSION

Mobile live has inevitably become a trend.Traditional media not only to adapt to the trend, but also to seize the opportunity.Traditional media has inherent advantages on technology, content and platforms. The future of the mobile live may be adding more technical means, such as VR, unmanned aerial vehicles and so on.Therefore, accelerating the application of new technology means can promote innovation in media integration.Traditional media with their own strong strength need to innovate.Only in this way can traditional media enhance their own level or even beyond the new media.

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# A Corpus-based Study on Bob Dylan's Lyrics and the Bible: Taking the Love Theme as An Example

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**Abstract:** Bob Dylan is the first artist to win the Nobel Prize for Literature as a "musical poet". His works have been analyzed by scholars from various perspectives, such as literature, history and postmodernism, but few have studied them from a religious perspective. By comparing the Bible-New Testament with Bob Dylan's poetry collection *The Lyrics 1961-2012* through the corpus analysis software Antconc, the religious elements in the themes of Bob Dylan's works can be analyzed.

**Keywords:** Corpus; Bob Dylan; the Bible; Religious culture; love theme

## I .INTRODUCTION

This chapter provides a general introduction of the study, including the review of current studies of Bob Dylan and the Bible, the background and significance of the research, and a short introduction to Bob Dylan and the influence of the Bible on Western culture.

### Literature Review

Since 2016, when Bob Dylan, as an American singer, was presented the Nobel Prize for Literature, many scholars has paid high attention to his works from different angles, such as the art, the literature, the history, the politics and so on. For example, in Gary Browning's paper *Bob Dylan: The Politics of Influence*, he explains Bob Dylan "has fashioned an identity of the ever-changing individualist" and reviews the theorists of influence and appraises how influence might be taken in Dylan. And then he reviews Dylan's "impact of musical traditions and popular movements".(Gary Browning, 2014).

A few scholars also study the relationship between Bob Dylan and the Bible, to find out the track of the Bible or Christianity left in his works. For example, *The Gospel According to Bob Dylan* written by Gilmour, Michael J. compares Bob Dylan's lyrics with the Bible and interpret the poetic imagery borrowed from the Bible.

### Significance of the Study

Inspired by Bob Dylan's art talent and influenced on literature, the author decides to do some research on his works. Bob Dylan was awarded The Nobel Prize in literature for 2016 for "having created new poetic expressions within the grade of American song tradition". And in his award announcement, Professor Horace Engdahl said: "It was a shock. With the

public expecting poppy folk songs, there stood a young man with a guitar, fusing the languages of the street and the bible into a compound that would have made the end of the world seem a superfluous replay. At the same time, he sang of love with a power of conviction everyone wants to own."(Horace Engdahl, 2016) The award announcement summarizes Dylan's language pattern and basic themes of lyrics, revealing the influences of the Bible in his works.

Therefore, considering there are very few studies on the relationship of the themes between Bob Dylan's lyrics and the Bible, especially from the perspective of corpus analysis, the author chooses to study Bob Dylan's poetic art from the perspective of faith, with the purpose of deepening people's comprehension of the relationship between the religion and art.

### 3.Main Content

This study can be generally divided into two parts: quantitative analysis and qualitative analysis. The second chapter mainly focuses on the analysis of the data. By showing the word lists of Holy Bible: New Testaments and Bob Dylan's *The Lyrics 1961-2012*, this chapter functions to find out the similarities on the themes between the Bible and Dylan's works from a scientific and objective perspective. The third chapter is the qualitative analysis, mainly talking about how the two are related by citing and analyzing examples. This paper aims to explore the relationship between art and the Bible in a more scientific way by the analysis of both data and texts themselves.

## II .QUANTITATIVE ANALYSIS

### 1.Corpus Establishment

#### 1.1 Original Text Processing

It is necessary to change the original texts into the versions in text format and use the UTF-8 character set encoding format, so that the corpus tool Antconc can recognize them and avoid coding errors.

#### 1.2 Using Lemma List and Stoplist

After opening the files in Antconc, we need to upload stoplist and lemma list. Stoplist contains function words and we can add words without great meanings in the whole book, such as the word "man" in the Bible, which appears 1302 times in the book but can't directly reflect the theme of it. With the lemma list, words sharing the same lemma can be collected together.

### 2.Results of Data Retrieved

2.1 Data of The Lyrics 1961-2012

In The Lyrics 1961-2012, there are 120132 lemma tokens and 5818 lemma types.(Figure 2-1-1). After applying the lemma list and the stoplist, there are 46433 lemma tokens and 5547 lemma types.(Figure 2-1-2).

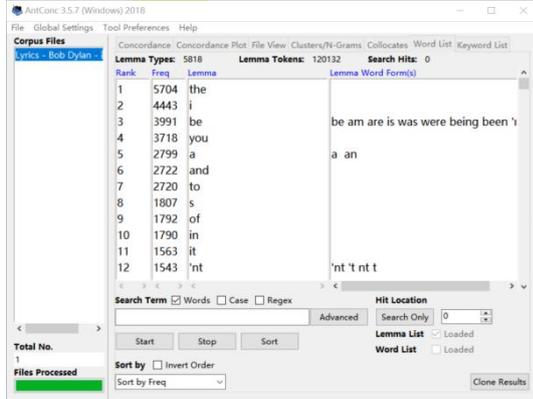


Figure 2-1-1 lemma data

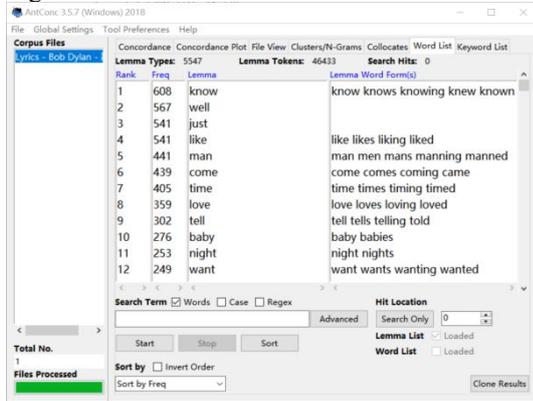


Figure 2-1-2

In figure 2-1-2, some words can be omitted since they have little relationship with the theme, such as “know”, “well”, “just”. After the further processing, we can acquire a list of the words used frequently.(Table 2-1-3)

Rank	Word	Frequency
1	like	541
2	time	405
3	love	359
4	baby	276
5	night	253

Table 2-1-3 relationship

And then, “Concordance” can be used to search the meanings of the words in the book. First, the word “like” has three meanings in the book.(Table 2-1-4)

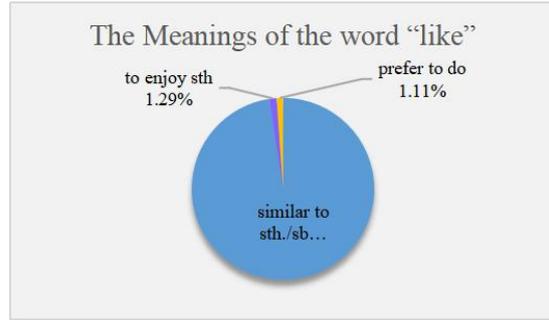


Table 2-1-4 the meaning of “like”

Similarly, the word “time” has two meanings in the book, 14.6% of them bears the meaning of “an amount of time” and 85.4% of them represents “an occasion when you do sth or when sth happens ”. The third frequently used word “love” only has one meaning: a strong feeling of deep affection.

Based on the figure, it can be assumed that the word “love” is worth further studying. Therefore, the “Concordance Plot” can be applied to view how the word “love” is distributed in Bob Dylan’s lyrics.(Figure 2-1-5)



Figure 2-1-5 love

2.2 Data of Holy Bible: New Testaments

In Holy Bible: New Testaments, there are 213050 word tokens, and 32499 word types.(Figure 2-2-1) After applying the edited stoplist which contained function words and words irrelevant to the theme of the Bible, there are 80827 lemma tokens and 30887 lemma types.(Figure 2-2-2) Then we can make a list of the top 10 frequent words.(Table 2-2-3)

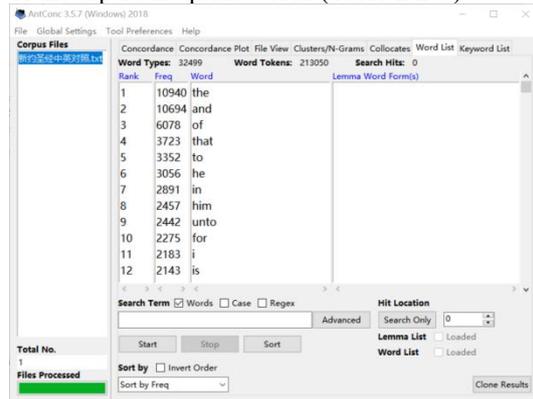


Figure 2-2-1 New Testaments

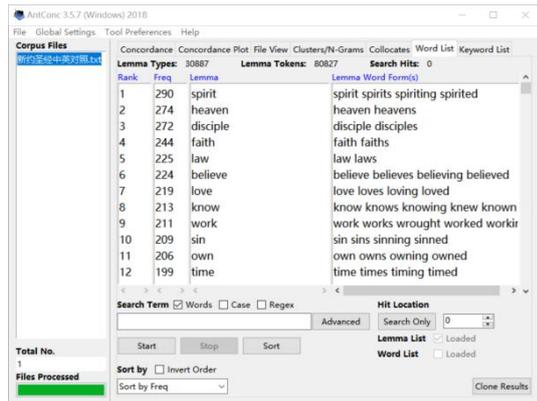


Figure 2-2-2 words irrelevant to the theme of the Bible

Rank	Word	Frequency	Rank	Word	Frequency
1	spirit	290	6	believe	224
2	heaven	274	7	love	219
3	disciple	272	8	know	213
4	faith	244	9	work	211
5	law	225	10	sin	209

Table 2-2-3 the top 10 frequent words

The list shows that the Bible mainly contains four basic themes: spirit and heaven, disciple and law, faith and love, and original sin. Since the word “love” is also one of the most frequently used word in Bob Dylan’s works, it is necessary to discover where is the word scattered in New Testament. Besides, since faith can be concluded as “loving God”, the word “faith” and “love” can be searched at the same time.(Figure 2-2-4)



Figure 2-2-4 four basic themes

3.Discussion of Data Results

Figure 2-1-5 shows the word “love” is scattered almost everywhere in Bob Dylan’s lyrics, which proves that “love” is one of the themes of his works. From the table 2-2-3, we can see that the word “love” ranks the seventh among the most frequently used words, and the gap between the frequency of the word “love” and the top frequency is small. Besides, the word “faith”, ranking the fourth, is another pattern of “love”. And from figure 2-2-4, it can be obviously seen that the two words appears throughout the whole book, especially in the second half part. Therefore, it is reasonable to conclude that Bob Dylan’s lyrics share a “love” theme with the Bible.

III.QUALITATIVE ANALYSIS

Actually, the Christian gospel regarded “love” as the foundation of humanity and morality, which is actively advocated and proclaimed in Christian doctrine. “Love” in Bible means loving God and loving others. This chapter focuses on the comparative analysis of the themes of loving God and loving others, using the method of analyzing the examples selected from New Testament and Bob Dylan’s lyrics.

1.Comparative Analysis of the theme of loving God

In the Bible, humans need to strengthen their love for God in order to obtain God’s mercy and blessing, and the love of God is mainly manifested in the love of Christ. In John, Jesus warned people that they can get the promise praying, but the premise is that they must love Christ. “For the Father himself loveth you, because ye have loved me, and have believed that I came out from God.”(John 16:27) “These things I have spoken unto you, that in me ye might have peace. In the world ye shall have tribulation: but be of good cheer; I have overcome the world.”(John 16:33)

And to love Christ is to obey God’s commandment, to live according to God’s will and to have faith in God. In Exodus, God said: “Thou shalt not bow down thyself to them, nor serve them: for I the LORD thy God [am] a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth [generation] of them that hate me; And showing mercy unto thousands of them that love me, and keep my commandments.”

The examples in the Bible reflect that loving God is a way to get mercy and blessing. In Bob Dylan’s lyrics, we can also see the significance of “loving God”.

“I was blinded by the devil/Born already ruined/Stone-cold dead/As I stepped out of the womb/By His grace I have been touched/By His word I have been healed/By His hand I’ve been delivered/By His spirit I’ve been sealed/I’ve been saved/By the blood of the lamb”(Bob Dylan, Saved)

In the lyric Saved, Bob Dylan described himself as being blinded by the devil and born corrupted. But after gaining the faith in God, he was touched and cured by God’s grace. Because the faith in God represents his love towards God, God responds to him by sending him grace and rescuing him. “I want to thank You, Lord/I just want to thank You, Lord/Thank You, Lord/Nobody to rescue me/Nobody would dare/I was going down for the last time/But by His mercy I’ve been spared/Not by works/But by faith in Him who called”(Bob Dylan, Saved) Bob Dylan expresses his gratitude to the Lord again and again, which reveals his religious faith. This example shows that loving God can guarantee people with a blessed life and what people need to do is to follow God, trust God and love God.

2.Comparative Analysis of the theme of loving others

In terms of loving others, the love between people is expressed in various aspects, including respecting others, trusting others, helping others, and so on. In John, Jesus says: “A new commandment I give unto you, That ye love one another; as I have loved you, that ye also love one another. By this shall all men know that ye are my disciples, if ye have love one to another.”(John 13:34-35) Christianity believes that, love, as the gift of God, has become a part of the Christian lives to redeem themselves and others. In Luke, Jesus tells a story the good Samaritan. A man was robbed, and was put on the road, but the passing

priests and Levites just turned a blind eye. Only the kind Samaritan helped this person, and it was only the Samaritan that was a kind neighbor blessed by God. It can be concluded that the person who is willing to help others can be blessed. "And he answering said, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy strength, and with all thy mind; and thy neighbour as thyself. And he said unto him, Thou hast answered right: this do, and thou shalt live."(Luke 10:27-28)

Loving neighbors as loving yourself is the sign of fraternity, which is advocated by the Bible. Bob Dylan spares no effort to celebrate the religious spirit dominated by love and construct a world of fraternity, in which everybody loves each other as loving themselves. And he actively promotes his creed of using love to resolve everything. For example, in the lyric Gotta Serve Somebody, Bob Dylan strongly urges people to serve others and be firm with love.

Many social identities are involved in the lyric, such as the ambassador to England or France, businessman, clever thieves, businessmen, high-degree thief, rock musicians, knowledgeable doctors, and so on. Regardless of your identity, you need to serve others, which is the most important thing you must do.

"You might be a rock 'n' roll addict prancing on the stage/You might have drugs at your command, women in a cage/You may be a businessman or some high-degree thief/They may call you Doctor or they may call you Chief/But you're gonna have to serve somebody, yes indeed/You're gonna have to serve somebody/Well, it may be the devil or it may be the Lord/But you're gonna have to serve somebody"(Bob Dylan, Gotta Serve Somebody)

This lyric is very simple and clear, compared to Bob Dylan's previous works, but it appeals to people to

ignore the differences between people and establish a fair society full of love and care, in which people have to serve other no matter who they are. The lyric perfectly echos the requirements of loving others in the Bible.

#### IV.CONCLUSION

##### 1.Summary

The Bible, as a concentrated expression of Western culture, has great influences in Western countries. At the same time, it played a vital role in the development of literature and art. Bob Dylan's songs and lyrics are also under the "shadow" of the Bible. From the quantitative and qualitative analysis, it is clearly seen that the love theme of Bob Dylan's works is consistent with that of the Bible.

##### 2.Limits And Prospects

Since the corpus is too large, and the author is inexperienced, the data might be not precise enough. Besides, the perspective of analyzing the data is a little bit narrow due to the limited ability of the author. In future study, the data can be interpreted in another angles deeply and more profoundly with various tools.

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# Analysis on the Advantages and Disadvantages of RMB Internationalization

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**Abstract:** From the current international economic development trend, the economic competition among countries is the competition between currencies. RMB internationalization is not only an important symbol of China's increasing economic development, but also a symbol of increasing economic strength. The internationalization of RMB is not only conducive to changing the current situation of China's "big trading country and small currency country", but also conducive to increasing coinage income, enhancing China's ability to adjust balance of payments, and further promoting China's economic and trade development.

**Keywords:** RMB internationalization; Advantages and disadvantages; Exchange rate; monetary policy

## 1 CURRENT SITUATION OF RMB INTERNATIONALIZATION

After the outbreak of the U.S. subprime mortgage crisis, the global economic imbalance has intensified, and the international voice for the reform of the international monetary system is also rising day by day. The recent European and American sovereign debt crisis has exacerbated the financial risks of Asian countries with large foreign exchange reserves. Therefore, Asian countries hope to use RMB with stable currency value for trade settlement to avoid external financial risks, which ushers in an excellent historical opportunity for RMB internationalization[1]. In recent years, academia has been exploring the internationalization of RMB one after another. Through summarizing nearly 300 articles in financial research and other related magazines, this paper finds that the research results mainly focus on the following four aspects: first, the research on the current situation of RMB cross-border circulation; Second, the impact of RMB internationalization on China's economy; Third, the feasibility analysis of RMB internationalization; The fourth is the research on the path choice and specific measures to promote the internationalization of RMB. According to these four aspects, this paper focuses on the previous works and views, in order to reveal the preparations and efforts needed to promote the internationalization of RMB.

In the process of RMB internationalization, it is very important to understand and estimate the rising overseas RMB stock and flow, because it will have an important impact on the formulation process and

implementation effect of the central bank's monetary policy and the further realization of RMB internationalization strategy.

RMB internationalization refers to the process that RMB can cross national borders, circulate abroad and become an internationally recognized valuation, settlement and reserve currency[2]. At present, although RMB can circulate abroad, this does not mean that RMB has been fully internationalized, but the continuous expansion of RMB overseas circulation will eventually internationalize RMB and make it a world currency.

According to the RMB internationalization report 2013, as of the fourth quarter of 2012, China's RMB internationalization index had reached 0.87, an increase of 49% compared with 0.58 of the previous year. Although the internationalization process of RMB is in the stage of rapid growth, the international use of RMB is still in its infancy.

## 2 ANALYSIS OF ADVANTAGES AND DISADVANTAGES OF RMB INTERNATIONALIZATION

### 2.1 advantages of RMB internationalization

(1) It is conducive to strengthening the ability of balance of payments regulation and balancing China's economy. At present, China has a certain amount of foreign exchange reserves. Its essence is huge loans to foreign governments, and it is facing inflation and national risks. After the internationalization of RMB, the substitution between currencies can be realized. China has a new way to use funds, which can not only reduce the amount of international reserves, but also reduce the loss of resources caused by China's use of currencies of other countries. The internationalization of RMB will help China get rid of the "Mead dilemma", that is, in order to maintain the external balance, China will sacrifice the internal balance, such as inflation rate, domestic full employment rate and so on.

(2) The internationalization of RMB is conducive to the development of the international monetary system towards stability and justice. The most important reason why the US subprime mortgage crisis can trigger the global financial crisis is that the US dollar is the main international currency[3]. The current international monetary system is dominated by developed countries, while developing countries are in a passive position. The internationalization of RMB is not only conducive to the diversification of

risks in the currency of national reserves, but also gives developing countries more voice, which will maintain the stability and justice of the international monetary system.

(3) It is conducive to reducing exchange rate risk and promoting the development of China's international trade. The change of exchange rate will increase the risk of domestic and foreign trade enterprises, and the fluctuation of exchange rate will have an adverse impact on the operation of enterprises. After the internationalization of RMB, domestic currency can be used for valuation and settlement in foreign trade activities, and the exchange rate risk faced by enterprises will become smaller, which can promote the development of China's foreign trade. The higher the degree of RMB internationalization, the smaller the exchange rate risk faced by China, and China's economy will grow further.

(4) It is conducive to China's further financial system reform. The internationalization of RMB and China's financial system reform complement each other. The internationalization of RMB will promote the reform of domestic financial system, and the reform of domestic financial system will also promote the nationalization of RMB.

## 2.2 disadvantages of RMB internationalization

### (1) Trade frictions increased.

The global financial crisis has hit the foreign trade of the world's major trading countries to a certain extent, and the economic growth of most countries has stagnated or fallen into recession. In order to restore the national economy, various countries have issued a series of trade protection measures, which has led to the rapid growth of trade frictions in China in recent years. In recent years, China has become the country subject to the most anti-dumping investigations, resulting in trade frictions with many countries. Although foreign trade is an important way to promote the internationalization of RMB, we should also solve trade frictions at the same time, so as to make the internationalization of RMB develop continuously.

### (2) Risks of RMB internationalization.

RMB internationalization is a "double-edged sword", which enables China to obtain the benefits of RMB internationalization at the same time, we must pay the corresponding price. RMB internationalization will affect the independence of China's monetary policy and increase the difficulty of macro-control[4]. According to Krugman's "triangle" hypothesis, in the three policy objectives of international free flow of capital, stability of exchange rate system and independent monetary policy, each country can only choose two of them at the same time. If a country chooses the stability of exchange rate and the free international flow of capital, it must give up the independence of domestic monetary policy. After the internationalization of RMB, a certain amount of RMB will circulate in the international financial

market, and its international flow will strengthen the central bank's control over domestic RMB.

### (3) Facing the "Triffin problem".

After the internationalization of RMB, China will assume the obligation to maintain international financial stability and act as the lender of last resort when necessary[5]. Therefore, China may face the "Triffin problem", that is, in the process of providing settlement and reserve means to reserve countries with trade deficit, there will be a conflict between the pressure of local currency devaluation and maintaining the stability of local currency value.

## 3 CONCLUSION

Although some progress has been made in the internationalization of RMB, it is still in the primary stage. RMB internationalization is a long-term development, which can not be achieved overnight, and RMB will not completely replace the US dollar in the short term. Whether a country's currency can become an international currency is determined by a country's economic strength and its influence in international trade, international investment and international finance. The internationalization of RMB should be based on the continuous development of China and the continuous improvement of its international status. At the same time, the offshore RMB market is very important for the development of RMB internationalization. In the first quarter of 2014, a net outflow of RMB 340 billion from China further supplemented the offshore RMB liquidity; Offshore RMB deposit. The balance of deposits reached 2.4 trillion yuan, accounting for 1.51% of global offshore deposits; Newly issued offshore RMB bonds increased by 160% year-on-year; The volume of offshore RMB foreign exchange transactions doubled over the fourth quarter of last year, which is also the theme of RMB internationalization in 2015. The internationalization of RMB is the general trend, but there are many difficulties on the road to internationalization. We need to move forward carefully and do not rush for success.

In line with the general trend of financial globalization, the opportunity and conditions for RMB internationalization have become more and more mature. RMB internationalization means that the financial products priced in RMB have become the investment tools of major international financial institutions, including the central bank. The transactions settled in RMB in international trade should reach a certain proportion. Promoting the internationalization of RMB has become a major and urgent issue in front of us. At this stage, it is particularly urgent and important to study the path choice and ways of RMB internationalization.

All countries in the world attach great importance to the internationalization of their currencies, because the degree of internationalization of a country's currency is not only an important embodiment of its

economic status in the world economy, but also an embodiment of a country's political status. In particular, the financial storm swept the world and the international monetary system dominated by the US dollar was challenged. Then, in the current situation of the international financial crisis, Does it provide an opportunity to reconstruct the international monetary system? This paper analyzes the significance of RMB internationalization to China and the world, and how China should make RMB internationalization

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# Talking about Live Marketing

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**Abstract:** In recent years more and more retailers to carry out live marketing. The reason for live marketing is the advancement of technology on the one hand and the change of people's habits on the other. Live marketing is characterized by high interactivity, entertainment and information fidelity. Through its characteristics, live marketing facilitates the matching of people and goods, thus promoting transactions. Finally, this paper puts forward relevant suggestions.

**Keywords:** Live Marketing; Retail; Trading

## INTRODUCTION

In recent years, along with the rapid development of mobile Internet, live streaming marketing has gradually become a craze. Relevant studies that have been conducted focus on the mechanism of live streaming's influence on consumers' purchasing behavior. Xiaoxiao Gong et al. (2019)[1] argued that live streaming caused impulsive consumer purchases. Feng Jun et al. (2020)[2] studied that live-streaming marketing causes impulsive purchases by creating a sense of social presence, mediated by consumer trust and mind-flow experiences. Liu Yang et al. (2020) [3]

studied consumer purposeful buying. In this paper, from a new perspective, a qualitative analysis is used to analyze the causes of live marketing and the mechanism of action, and finally, relevant suggestions are made.

## 1. LIVE MARKETING GENERATED REASONS

The development of retail, from the initial form of purely offline physical stores, to the use of the Internet to expand online, and now to test the water live, are constantly using the results of technological advances to cater to people's new life, shopping habits process. The reason for the emergence of live marketing, one is the advancement of mobile communication, video production and other technologies, so that the cost of live broadcast reduced, improved quality, and can be widely used. Second, people's habits have changed, spending more time on cell phones and other electronic terminals, more accustomed to the form of live video streaming to access network information, shopping. Retailers for more contact with consumers, to adapt to people's new habits of life consumption, it produced a live marketing.

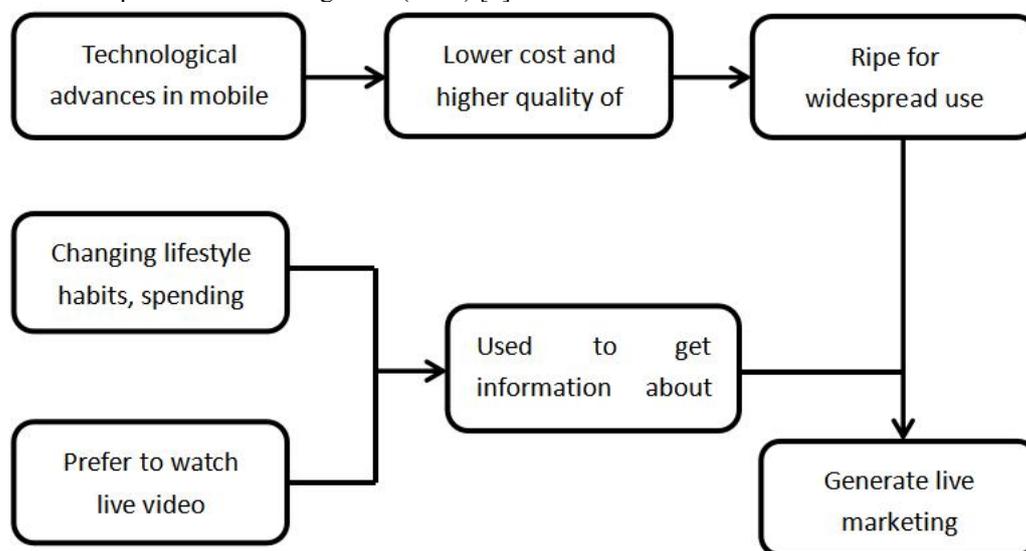


Figure 1 Diagram of live marketing generation

## 2. LIVE MARKETING CHARACTERISTICS

In essence, live marketing is a new marketing method different from the previous offline and online. It has the following characteristics: first, interactive. In the live scenario, consumers can communicate with the anchor at any time through the live room text, voice, video link, at any time to express the attitude of the

goods, access to the personal information of the goods, the anchor can also adjust the content of the introduction of goods at any time, the buyer and seller can interact instantly. Second, the social entertainment is strong. In the live video, consumers can communicate with each other and with the anchor instantly, and each participating subject of the live

broadcast is not only communicating with the goods, but also displaying their personality, which has strong social entertainment under the leadership of the anchor. Third, the information fidelity is strong. Live video not only can show the appearance of goods, parameters, prices and other static information, but also can show the actual effect of goods, intuitive feelings and other information closer to the real goods, with stronger fidelity of commodity information.

### 3. THE MECHANISM OF LIVE MARKETING TO FACILITATE TRANSACTIONS

Retail elements of people and goods, in the new social and technological conditions have a richer connotation. The first is people, that is, the target consumer groups. Retailers need to clarify the product consumer groups, through certain marketing methods to attract the attention of potential users, and analysis of user needs, including the actual use of goods and spiritual and cultural connotations of the demand. Next is the goods, that is, the goods to be sold. On the basis of mastering the user's needs, the retailer should provide goods that can better meet the user's needs. Correspondingly, the value of goods is mainly reflected in the use value and spiritual and cultural value of goods. Finally, the retailer should provide convenient sales channels to reach the transaction. In the current consumer-centric era with a great abundance of goods, the core of retailing is to grasp consumer needs and provide goods that can better meet them, that is, to facilitate the matching of people and goods, and finally to complete the transaction through the field.

Unlike the traditional physical retailing of people and goods as one, the goal of live marketing focuses on matching people and goods. In other words, live marketing is to use the characteristics of live to facilitate the matching of people and goods. In terms of people: first, the use of live marketing social

entertainment to attract the attention of the target group. Live social entertainment can gather network popularity, its different social entertainment style will attract different social groups, so retailers should grasp the social entertainment style and the target consumer group match. Second, use the strong interactivity of live marketing to grasp the needs of consumers. Consumer demand for goods is multi-level, is in the process of understanding the goods dynamic changes, but also by other consumers, anchors and other influences, so in the live marketing interaction, the marketing subject should have the ability to grasp the needs of potential customers as well as influence. In terms of goods: the use of all aspects of live marketing features to show a full range of commodity information. As mentioned earlier, consumers' demand for goods includes both the use value of the goods themselves and the spiritual and cultural value that the goods can bring, so the live marketing display of goods information should include both. First, the use of live marketing social entertainment, strong interaction to show the spiritual and cultural value of goods. The spiritual and cultural value of goods comes from the consumer's identification with the concept of goods, this spiritual and cultural feelings in addition to the consumer's appreciation of the goods themselves, but also from the communication with the business. The social entertainment and interactivity of live broadcast provides a better carrier for such communication. Second, the use of strong interactivity, information fidelity characteristics to show the value of the use of goods. Interactivity can be used to instantly adjust the display content to meet the rapidly changing needs of consumers, and information fidelity can be used to display the intuitive feeling and actual effect of the goods to consumers, so as to more fully demonstrate the use value of the goods.

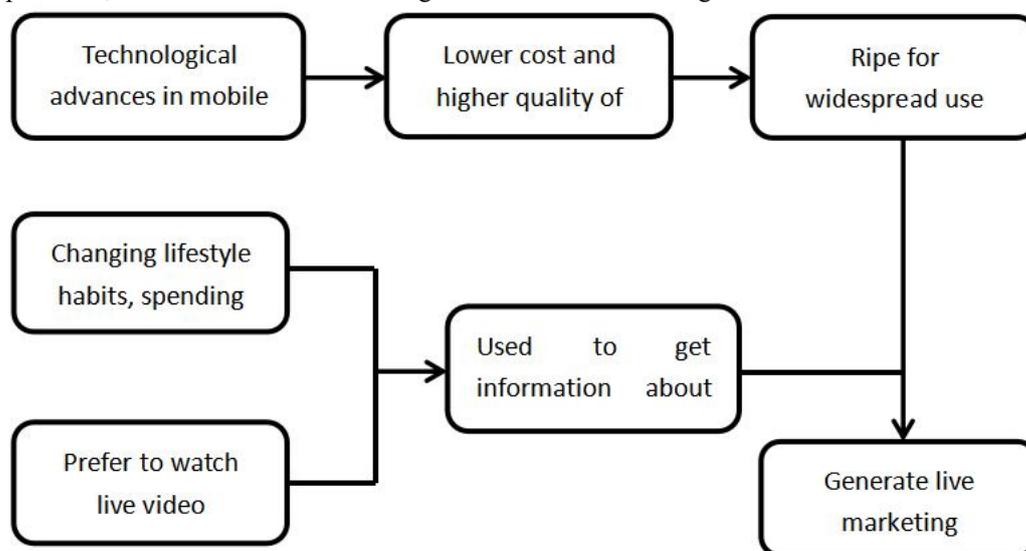


Figure 2 Diagram of live marketing to facilitate the matching of people and goods

#### 4. RECOMMENDATIONS

##### 4.1. physical retailers should be rational to carry out live marketing

The current live marketing has generally caused a decline in retail efficiency, so retailers need to consider carefully and rationally when making relevant decisions, and not blindly follow the trend. Retailers need to recognize the status quo of live marketing in the industry, recognize the capital investment in live marketing and the revenue it can bring to the company, but also correctly understand the role of live marketing mechanism, and through the experience of other retailers, lessons learned, to improve the overall understanding and mastery of business management strategies related to live marketing. On the basis of all-round understanding of live marketing, combined with the company's development strategy, decide whether to carry out live marketing.

##### 4.2. Choose the appropriate live style to attract target customers

Current society is extremely rich in commodity information, consumer attention span is very short, businesses need to quickly attract the attention of potential consumers. For this form of live marketing, the most direct and effective way to quickly attract consumers is to give consumers a strong, good subjective feeling, that is, through the control of the live content to create a suitable overall style, so as to give consumers a good experience. First of all, attention should be paid to the matching of the live broadcast style with the target customer group. Retailers need to take the target customer group as the center, grasp the characteristics, habits and preferences of target customers, and create a suitable live broadcast style in a targeted manner. Second, pay attention to the choice of anchor personality. In the live marketing consumers directly face the anchor, the personality characteristics of the anchor is an important part of the creation of live style, retailers need to pay attention to the selection of suitable personality characteristics of the anchor. Finally, pay attention to the choice of live form and content. Live form and content is the specific carrier of live style,

to cater to potential consumer preferences.

##### 4.3. Use interaction to accurately capture and guide customer needs

Mastering customer needs is the premise of marketing, retailers need to accurately grasp customer needs in live marketing, and can be properly guided. In the communication scene of live marketing, the anchor is the core, potential consumers participate, the capture and guidance of customer needs that is achieved through the communication process. On the one hand, the anchor to understand the needs of consumers through their feedback on the live process. When watching the live video, consumers can ask questions about their concerns in the live broadcast, or give feedback on the information points of the products introduced by the anchor. The anchor and the merchant can understand the more specific and diverse needs of the consumers based on their feedback. On the other hand, anchors have to guide consumers during the communication process. Consumers' needs for differentiated characteristics of similar goods are not set in stone, or even necessarily clear, which gives merchants more room for marketing. Anchors can take advantage of consumers' trust in their personalities, exploit their herd mentality, and combine the characteristics of their goods to guide customer demand.

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# Study on the Influence Factors of Aging People Adoption Intention to Use Mobile Payment in China

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**Abstract:** Considering the rapid growth of the aging population in China, the demand of the aging people for mobile payment cannot be ignored. Therefore, this study aims to investigate the relationship between perceived value and adoption intention by the aging people use mobile payment service in China. There were 404 valid questionnaires were collected from the aging people in Guangzhou, China. Descriptive statistic and Inferential statistics were used to analysis all of the variables. The results showed that usefulness, convenience and preferential have positive influence on perceived value while privacy risk and security risk have negative influence on perceived risk and then, perceived value has positive influence on adoption intention.

**Keywords:** Mobile payment; Perceived value; Adoption Intention.

## INTRODUCTION

As mobile internet and mobile commerce is rising rapidly in recent years, mobile payment has developed and expanded so that it has become a crucial part of mobile commerce. In China, mobile commerce and mobile payment complement each other. According to (CNNIC, 2018), as of June 2018, China's mobile payment users reached 566 million, accounting for 71.9%, an increase of 7.4% over the last year. However, mobile payment adoption has importantly popular in China aiming for the cashless society, the vast majority of aging people cannot adapt the technology for the reasons such as unfamiliar in using smart phone application and mobile payment (Ipsos, 2017), so they are still in a relatively weak position in mobile Internet. From 2014 to 2050, the consumption of China's aging population will increase from 4 trillion yuan to about 106 trillion yuan, accounting for 33% of GDP (Wu & Dang, 2014). The Chinese government and enterprises are actively promoting mobile payment to be move advanced and general to the aging people (Ipsos, 2017). Based on this, the mobile payment market for the aging population has a broad space for exploration. Therefore, it is necessary to verity the factors influencing aging people adoption intention to use mobile payment, which is provide theoretical reference for the development of the mobile payment market.

Therefore, the research objectives are as follows: (1) To analyze the influence of perceived benefits on perceived value of mobile payment; (2) To analyze the influence of perceived risks on perceived value of mobile payment; (3) To identify the influence of perceived value and adoption intention.

## 2. LITERATURE REVIEW

### 2.1 Perceived Usefulness

Perceived usefulness is described as a customer's

perception of the potential of a new service, providing them with many benefits and helping their improve job performance when using the service (Mathwick et al., 2001). The older consumer knew little about benefit of using mobile payment services and use them which is less frequency than younger consumers (PEW, 2016). With the prosperity of social media and the popularity of mobile payment, the consumption thinking of the aging people is being impacted, they gradually realize the benefits of mobile payment and intend to try online shopping and mobile payment (SIF, 2018).

### 2.2 Perceived Convenience

Compared with traditional payment methods, the concept of convenience of mobile payment is described as agility, accessibility and availability without limited by time and space (Luarn & Lin, 2005). Moreover, the convenience of online shopping and mobile payment have given more choices for aging people and which is also the driving force for the aging people to use mobile payment (Wei, 2017).

### 2.3 Perceived Preferential

Biswas et al. (2013) pointed out that preferential activity with deep discounts would increase purchase intention of customer because larger discount can make consumers realizing the difference from the original price. It can be seen that price advantage is one of the influencing factors for customers to use this service (Mallat, 2007).

### 2.4 Privacy Risk

Pagani and Hofacker (2010) proposed the definition of privacy risk, which describes the risk that the personal information is leaked or illegally used in the process of use. While using mobile payments, consumers are concerned about privacy issue such as loss of individual data, personal information and the transaction itself (Bauer et al., 2005).

### 2.5 Security Risk

In mobile services, Lwin et al. (2007) found that security risk is one of the issues of particular concern to customers. As Amin (2008) suggested that in using mobile service products, consumers want a secure system.

### 2.6 Perceived Value

Kim et al. (2007) thought that perceived value directly affects consumers' adoption intention in the research of mobile Internet. Regardless of the age difference in mobile service products, the higher perceived value will increase customer adoption intention (Kumar & Lim, 2008).

### 2.7 Adoption Intention

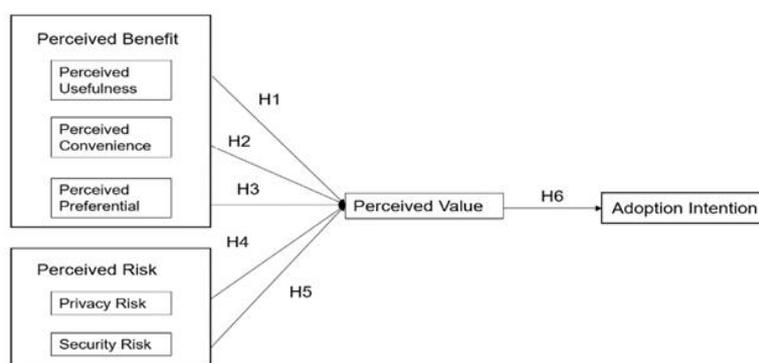


Figure 1 Conceptual framework

### 3.2 Research Hypothesis

H1. The perceived usefulness of aging people to mobile payment has positive influence on perceived value.

H2. The perceived convenience of aging people to mobile payment has positive influence on perceived value.

H3. The perceived preferential of aging people to mobile payment has positive influence on perceived value.

H4. The perceived privacy risk of aging people to mobile payment has negative influence on perceived value.

H5. The perceived security risk of aging people to mobile payment has negative influence on perceived value.

H6. The perceived value of aging people to mobile payment has positive influence on adoption intention.

### 3.3 Sample and Data Collection

Questionnaire was used to collect primary data from a sample of mobile payment users who are aging people in Guangzhou, China. The target respondents for the questionnaire will be selected for the aging people who are the aged 60 or over. According to the Taro Yamane formula (Taro Yamane, 1973) to calculate the data of sample size of this study is 400. The results of Cronbach's alpha test shown that all the variables get higher values of 0.8 to 0.9, which

Some authors study of mobile services product follows the concept of intention to use as proposed in Davis et al. (1989). In the studying the users' behavior of mobile payment by value-based adoption model, also shown that perceived value of user can well explain their intention to use mobile payment (Kleijnen et al 2007).

### 3. METHODOLOGY

#### 3.1 Research Framework

Based on value-based adoption model and above literature review, the conceptual framework of this study will be as follow; Mediating effect is not testing in this study.

means that the greater the reliability of questionnaires. All the data will be collected and analyzed with descriptive statistic to measure the items of each variable. Then, relationship of all variables and hypothesis testing will be analyzed with inferential statistic.

### 4. DATA ANALYSIS

Concerning with the demographic information of the respondents, this sector composes the information with gender, age range, education, frequency, mobile data traffic, deposit, mobile payment application and items used. The majority of respondents are female which has 236 respondents (58.4%) and 168 males (41.6%), most of the age range was between 60-70 years old. The majority of education level of respondents are high school or lower which has 201 respondents (49.8%), frequency used in a month which has 224 respondents (55.4%), mobile data traffic below 500M which has 160 respondents (39.6%) and deposit are less than 1000 yuan which has 253 respondents (62.6%). For the data of mobile payment application, the majority of respondent's choice to use WeChat which has 237 respondents (58.7%) and use items mostly to pay bills and living expenses which has 146 respondents (36.1%). The value of mean, standard deviation and the level agreement for each variable shows in the table 1.

Table 1 Analysis of the Agreement Level

Variable	Mean	Std.	Interpretation
Usefulness	3.97	0.71	Agree
Convenience	4.16	0.70	Agree
Preferential	3.54	0.68	Agree
Privacy Risk	2.70	1.090	Neutral
Security Risk	2.45	0.93	Disagree
Perceived Value	3.79	0.61	Agree
Adoption Intention	3.79	0.60	Agree

Table 2 Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Model Summary	ANOVAa
	B	Std. Error	Beta				
(Constant)	2.063	.147		14.014	.000	R <sup>2</sup> =0.717	P=0.000b
Use	.191	.036	.222	5.337		.000	
Con	.198	.035	.228	5.622		.000	
Pre	.233	.030	.259	7.651		.000	
Pri	-.133	.023	-.237	-5.874		.000	
Sec	-.129	.026	-.198	-4.966		.000	

a. Dependent Variable: Perceived\_value  
 From the table 2, the linear regression explains 71.7% of the variance in perceived value was influenced by five factors. The ANOVA table appear Sig=0.000 which means that variables have least one variable effect on perceived value. Moreover, the results shown that usefulness, convenience and preferential

have positive effect on perceived value while privacy risk and security risk have negative effect on perceived value. Hence, the equation of perceived value is:  
 $PV=2.063+0.191Use+0.198Con+0.233Pre-0.133Pri-0.129Sec$

Table 3 Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Model Summary	ANOVAa
	B	Std. Error	Beta				
(Constant)	1.037	.127		8.145	.000	R <sup>2</sup> =0.544	P=0.000b
Perceived Value	.726	.033	.738	21.907	.000		

Dependent Variable: Adoption\_intention  
 As table 3 shown, the linear regression explains 54.4% which means the variable of perceived value can be able to predict variable adoption intention. The sig value of perceived value is 0.000 which is the

alpha level ( $\alpha=0.05$ ) lower than the significant value, this means that the variable of perceived value has positive effect on adoption intention. Therefore, the equation of adoption intention is:  $AI=1.037+0.726Pv$

Table 4 Summary of All Hypothesis

Items	Hypothesis	Result
H1	The perceived usefulness of aging people to mobile payment has positive effect on perceived value.	Accepted
H2	The perceived convenience of aging people to mobile payment has positive effect on perceived value.	Accepted
H3	The perceived preferential of aging people to mobile payment has positive effect on perceived value.	Accepted
H4	The perceived privacy risk of aging people to mobile payment has negative effect on perceived value.	Accepted
H5	The perceived security risk of aging people to mobile payment has negative effect on perceived value.	Accepted
H6	The perceived value of aging people to mobile payment has positive effect on perceived value.	Accepted

## 5. CONCLUSION, DISCUSSION AND RECOMMENDATION

### 5.1 Conclusion and discussion

This study indicates that perceived usefulness is an important factor in determining user's use of mobile payment. Liu (2018) proposed that usefulness have a significant impact on perceived value. It means that when the user's perceived usefulness enhanced, it will increase the perceived value. Moreover, the result show that the perceived usefulness of aging people to mobile payment has positive influence on the perceived value. Teo et al. (2015) though that convenience is especially important in mobile payment functions. As the current major payment method, mobile payment has been recognized by the majority of users for its convenience. It means that if the convenience of mobile payment is increased, perceived value will be increased. As the finding of the study, the perceived convenience of aging people to mobile payment has positive influence on the perceived value. Most of mobile payment platforms use preferential policies to attract users with preferential subsidies, reducing the cost of funds for users in the payment process, and improving the perceived value of users. It means that high perception of perceived preferential will be increased perceived value. This study also agreed by the previous study of Liu (2018) proposed that preferential has positive effect on perceived value.

Another finding of this study is that the dimensions of perceived risk have influence on adoption intention. Some scholars have found that privacy risk has negative effect on perceived value, it means that high perception of privacy risk will be undermine perceived value (Li, 2013; Liu et al., 2015). As the finding of this study, the perceived privacy risk of aging people to mobile payment has negative influence on the perceived value. Kleijnen et al. (2007) though that security risk has negative effect on mobile payment delivery. In the study of perceived risk and users' intention to use, it is found that security risk has a significant negative impact on users' perceived value (Fan, 2011). It means that high security risk will be undermine perceived value. The result of this study also supported that the perceived security risk of aging people to mobile payment has negative influence on the perceived value.

Some literature claims that perceived value has been demonstrated in many high-tech electronics commerce, which has been used to verify significant impact on user's adoption intention of wireless SMS (Turel et al., 2007), mobile service delivery (Kleijnen et al., 2007), mobile internet (Kim et al., 2007), third-party mobile payment (Liu, 2018). It means that high perception of perceived value will promote users' adoption intention. As the result shown that the perceived value of aging people to mobile payment has positive influence on the adoption intention.

### 5.2 Implications

The findings of this study have provided some implication for business and mobile payment providers. This study indicated that enhancing adoption intention of mobile payment should focus on increasing perceived benefits and reducing perceived risks. In the terms of perceived benefits, mobile payment providers should make improvements in optimizing system functions, increasing online functions of living services and financial products, and improve the construction of offline mobile payment scenarios; focus on designing easy-to-use browsing interfaces and enhancing interactive experiences. Moreover, in different areas, different ages, different mobile payment experience in using the Internet for customer segmentation to develop more functions. In the terms of perceived risks, providers should focus on establishing a good security system, using artificial intelligence technology to protect customer privacy and property security, and replacing traditional digital cryptography with biometrics. Furthermore, banks and mobile payment providers should work together to optimize the payment systems, improve financial management of mobile payment accounts, promote the integration of singular payment tools into diversified financial service system, and avoid related potential risk. Therefore, in order to enhance the adoption intention of mobile payment, the relevant stakeholders should focus on improving aging consumers' perceived value.

### 5.3 Recommendation

The following recommendations from this study will be distributed to the relevant stakeholders such as mobile payment providers, the banks, the online merchants, the policy makers of the services industry, services sectors of the government and the future researchers. The stakeholders have to make sure mobile payment to be easy to operate, easy to learn and easy to use. Moreover, all the stakeholders need to focus on how to make sure mobile payment they have provided services that must be saved time and improved life efficiency, mobile payment can be used anytime and anywhere. Furthermore, the stakeholders should be concerned about the customers' demand for preferential activities when using mobile payment, because they get subsidies and discount activities can save money. In terms of perceived risk, the stakeholders have to make sure funds deposited in mobile payment is secure. Then, the stakeholder should concern for the personal information could not be intercepted or accessed.

### 5.4 Limitation

Considering the limitation of this study, there are some suggestions for the further researchers. Firstly, the sampling group can be expanded regionally for collection. Secondly, further research can combination other measurement methods to test hypothesis. Finally, future research could explore the effects of different types of factors and research

model on user in mobile payment context.

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# Practical Research on Ideological and Political Theories Teaching for Students Specialized in Computer Science and Technology in Colleges and Universities

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**Abstract:** Ideological and political theories teaching in all courses is a new type of educational thought that has emerged and developed continuously in the modern academic field based on the current actual teaching situation and the improvement of teaching effects. In recent years, many colleges and universities have successively carried out ideological and political education innovations and explorations, and have positively promoted the development of ideological and political education. Many colleges and universities do not pay attention to the construction of ideological and political courses in some professional studies, such as computer science and technology majors. Many people think that it is difficult for science department to realize ideological and political construction in the curriculum. This paper expounds the formation, meaning and characteristics of ideological and political theories teaching in all courses to strengthen the grasp of the concept of ideological education and form a relatively three-dimensional understanding of ideological and political courses.

**Keywords:** Colleges and universities; Computer science and technology major; Ideological and political theories teaching in all courses

## INTRODUCTION

Ideological and political theories teaching in all courses is a new type of ideological and political education concept developed in recent years. It is the embodiment of the mission of "cultivating morality and cultivating people" in current education. It carries out in-depth thinking on the ideological and political education of our country today, and has a certain modernity and innovation. When enhancing and optimizing the education and teaching of ideological and political theory courses, teachers need to fully explore the ideological and political connotations involved in different courses, so that the educating functions of different courses can be effectively brought into play, so as to cultivate talents in higher education.

## 1.THE SIGNIFICANCE OF IDEOLOGICAL AND POLITIC THEORIES TEACHING OF COMPUTER

## SCIENCE COURSES IN COLLEGES AND UNIVERSITIES

Many schools misunderstand the true meaning of ideological and political course. They believe that the learning of ideological and political course is to make students abide by the rules of the school. However, the real purpose of ideological and political course is to cultivate students' good morality. Because of the misunderstanding of ideological and political courses, their attitude towards ideological and political courses is not so clear [1]. They also believe that it is only necessary to integrate ideological and political education into other disciplines in the classroom, but many teachers do not know how to better integrate ideological and political education into their own classroom, which will lead to the lack of ideological and political education to a certain extent. Some colleges and universities even define the ideological and political course as an elective course, and some students will not choose this course. In fact, all students must learn the ideological and political courses. The ideological and political education can help students establish correct values and cultivate students to become one with good ideological health and behavior. In addition, ideological and political theories teaching in all courses conform to the law of educational development and the development needs of the times. In the context of higher education, ideological and political theories teaching in all courses not only gives sufficient respect to the development law of socialist education, but also fully reflects the multiple values of modern society, so that education can adapt to the development of the times [2]. The contents of ideological and political theories teaching in all courses will be updated with the changes of the times to a certain extent. The changes of the times will change people's thoughts and make people's views on world and values change to a certain extent, and students' ideological sensitivity can be improved with ideological and political courses. More importantly, ideological and political theories teaching in all courses can integrate explicit education with implicit education to effectively reflect the practical needs of moral education.

## 2. HOW TO IMPLEMENT IDEOLOGICAL AND POLITICAL THEORIES TEACHING IN ALL COURSES

2.1 To achieve effective integration in the classroom  
Effective integration means that teachers need to find hidden ideological and political elements, and rationally use these elements in the teaching process of professional courses. When integrating, teachers need to ensure natural integration to prevent obvious conflicts between ideological and political elements and professional teaching. Teachers actively try in their teaching, constantly explore the integration points of drills, and integrate life examples and social hot events into professional teaching as much as possible, but they need to avoid direct and rigid application. At the same time, it is necessary to be as appropriate as possible in the process of integration. The selected examples must not only be close to students' daily life, but also need to be close to the development of the times, and stimulate students' sense of resonance with interesting ways [3]. In addition, the education department should organize professionals to compile the ideological and political teaching materials of national courses, formulate the unified teaching objectives of colleges and universities, and provide some scientific teaching plan courseware, so as to provide effective reference for the implementation of ideological and political theories teaching in all courses.

### 2.2 To build a reasonable evaluation system

At present, many colleges still lack a high degree of perfection for the construction of ideological and political classes. It is difficult for them to find mature curriculum ideological and political models to learn from, it is difficult for them to construct scientific and reasonable and systematic evaluations. The arbitrariness in the teaching evaluation will directly affect the teaching effect of the ideological and political courses, which will significantly slow down the progress of the ideological and political construction of the courses, and affect the implementation of "cultivating morality and cultivating people". It is extremely difficult to construct a more perfect evaluation system, and there are no enough lessons learned from the ideological and political construction of higher education. Teachers and schools also lack some say in the construction of the evaluation system, so it is difficult to build the school evaluation system. But the evaluation system is important for the curriculum [4]. First of all, it has a restraining effect on teachers. In the evaluation system, students can conduct curriculum evaluation. They can directly put forward their opinions in the evaluation system if teachers have little or no ideological and political construction in the curriculum. And it also has a restraining effect on teachers. Teachers can also evaluate students in class according to the classroom situation and point out some problems of students. Finally, it can

effectively promote the construction of ideological and political education in the curriculum, because the evaluation system also plays a supervisory role. With the evaluation system, the school will pay more attention to the construction of ideological and political courses, which is conducive to the smooth construction of ideological and political theories teaching in all courses.

### 2.3 To promote exchanges and cooperation

Ideological and political theories teaching in all courses can not be a single course. However, many teachers can not understand how to integrate into ideological and political education. Therefore, it is necessary for ideological and political teachers to cooperate with professional teachers in the process of education to realize resource sharing. Ideological and political teachers can properly carry out some lectures or knowledge sharing meetings on ideological and political theories teaching according to the requirements of the school, so that other professional teachers can understand and obtain the methods of integrating ideological and political theories teaching into professional courses [5]. Because professional course teachers will have some difficulties in the integration of ideological and political theories teaching in all courses, teachers need to work together to find the most suitable entry point and constantly improve problems from the practice.

## 3. CONCLUSION

Computer science and technology major is a major that is partial to science. In senior high school, the study of ideological and political courses is less than that of liberal arts students. Ideological and political theories teaching in all courses can help student cultivate correct values and world outlook. The construction of ideological and political courses for computer majors can not only make students to establish correct values, but also reduce the time for schools to arrange ideological and political courses alone. Colleges and universities are an important position for cultivating new people in the new era of socialist construction. Students' lack of correct values and idea will inevitably have a serious impact on the harmonious and stable development of the society. In this case, the educational mission of colleges and universities needs to comply with the needs of the development of the times, comprehensively establish the task of moral education, so as to actively promote the construction of ideological and political theories teaching in all courses.

## ACKNOWLEDGEMENT

Henan soft science research program: Research on activation and utilization of oracle bone inscriptions under the background of new cultural innovation (212400410261); The first batch of Ideological and political model courses in undergraduate colleges and universities in Henan Province: front end

development technology (JG [2020] No. 531); Anyang Normal University School level high-quality online open Courses: web design; Anyang Normal University of campus practice education demonstration base: Anyang Normal University - big data practice education base of Beijing xuejia'ao Software Technology Development Co., Ltd

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# Thoughts on Raymond Williams' Study of Drama History

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**Abstract:** As a famous cultural Marxist scholar, Raymond Williams' dramatic criticism is one of his most important cultural critical methodology forms. Williams's drama criticism is based on the drama history criticism. Through the analysis of the content and form of the drama, Williams points out that the characteristics of the study of the British drama history are as follows: the development of the medieval drama is influenced by the religious mysticism, and moral reflection is an important theme. The commercialization of capitalism in modern times made the content of English drama have a strong sense of class struggle, individualism and heroism coexist. In modern times, the development of English drama is influenced by bourgeois ideology, highlighting the inner feelings of the middle class and the declining aristocracy. It laid a historical foundation for the criticism of drama.

**Keywords:** drama, drama history, culture option,

## 1. INTRODUCTION

Williams believes that as a literary form, the content and style of a play vary according to the development of society and history, and its complex and changeable forms of expression will be more close to people's life than other literary forms. The creation of a play is based on the society. It organizes the popular language in the society into a logical and meaningful text through the way of oral expression, increases the performance effect of the work, and through the self-exploration of actors, this logic and meaning are vividly expressed, and can be understood by more people regardless of the way of communication or acceptance. Therefore, as a methodological form of cultural criticism, drama criticism can effectively analyze and explain the process of social and cultural development, especially the contradictions in these processes. Williams's analysis of these contradictions is mainly based on his relationship between the drama itself and the social background. The actor's performance of the plot often conflicts with the social background, which comes from the change of social and political significance and cultural significance.

## 2. THE DEVELOPMENT OF MEDIEVAL DRAMA WAS INFLUENCED BY RELIGIOUS MYSTICISM, AND MORAL REFLECTION BECAME AN IMPORTANT THEME

Williams' drama criticism never left the history of drama development. He first studied the formation

and development of medieval drama. Williams believes that the medieval English drama is directly related to the social form on the surface. The drama of this period has its unique style, that is, most of the dramas are derived from religious contents, such as the ritual of worship and various complicated doctrines. These original plays were mainly used to preach and interpret religious ideas in the early days of their formation, when many religious believers could not read religious books written mainly in Latin. After that, the drama was also called a main way of performing during the parades of hymns. In the course of performing, mystery plays and fantasy plays became the main contents, and the classic religious stories of "Last Supper", "Satan's Oblivion" and "Last Judgment Day" were staged again and again. In addition to its close relationship with social and religious organizations, Williams found that the medieval drama had another feature: moral drama was more and more inserted into religious drama. In Williams' opinion, this kind of moral drama is refined from the emotional mode of religious drama. The difference between this kind of moral drama and mystery drama and fantasy drama is that it is not entirely from the religious doctrine and story, but from the thinking of self-existence in the society at that time.

In the medieval society, the most frequently encountered problem is the pain caused by life and death, and no one has the priority to explain and solve the problem of life and death, so this problem makes the people in the society at that time most directly form a flat relationship with people. When this universal fate comes, the form of moral drama can form a common cultural form." Although the story plot is exaggerated, the character performance is abstract, the contradiction of the event is dramatic, but the formation of moral drama reflects the believers in the society at that time self-knowledge and the transformation of social knowledge methods." [1] In the society at that time, although religion explained life and death, explained the process of human development, but never solved all the problems of human life, so people from the beginning of the obsession with religion to the dual obsession with religion and people. Williams then analyzed the development of English drama at the end of the 15th century, and the form and content of the drama had undergone new changes at the end of

the 15th century, popular religious stories and plots had declined on the whole, and these old forms had been forgotten by the performers. In this period, the social environment of Tudor Dynasty became the background of drama development, because the form of drama organization undertaken by the trade union in the past could no longer meet the needs and welcome of ordinary people, and in the new social environment, commercial interests gradually became a hot topic of society, and this commercial interests became a part of social structure in the establishment and development of Tudor Dynasty, so under the demand of common commercial interests, ordinary people, drama and Tudor Dynasty formed an organic system.

### 3. THE COMMERCIALIZATION OF CAPITALISM IN MODERN TIMES MADE THE CONTENT OF ENGLISH DRAMA HAVE A STRONG SENSE OF CLASS STRUGGLE, INDIVIDUALISM AND HEROISM COEXIST

Especially in the middle of the 16th century, theatrical performances were no longer paraded in the streets as before, but rehearsed and performed in fixed places, at which time the earliest theatres in England began to form. According to Williams' analysis, the development tension in this stage of drama history does not come from the structural changes of the script but from the economic and political changes in the social context.[2] He believed that the theatre could be established because the theatre staff were controlled by speculators, who began to build their own theatre business circles in the suburbs of London. In order to gain more economic and policy support, the speculators tended to link the content of the theatre to the achievements of Queen Elizabethan times, thereby promoting the lifestyle and spirit of the royal family and receiving the protection of the royal family.[3] But this phenomenon did not last for a long time in the history of British drama. With the expansion of Puritanism, the nationality of drama was disintegrated. The audience of this "private theatre" represented by speculators became smaller and smaller, because the social environment was in constant change." "It may be because during the last fifteen years of Queen Elizabeth's rule, and during the first years of James I's rule, the conditions under which the drama expressed the mainstream of national life were already in a state of high tension, which corresponded to the contradictions that quickly erupted in the open political field." Williams analyzed this phenomenon, and thought that the royal family and aristocrats could no longer continue to protect the theater run by speculators in the environment at that time, because these aristocrats had been separated from the life of ordinary people, and the distance was constantly increased, at this time, the characteristics of the script is no longer blindly proclaiming the glory of the royal family, but turned their eyes to the contradictions of

real life. Because in the background of that time, the bourgeoisie not only controlled the spearhead, but also formed the scale of development, the contradiction between the bourgeoisie and feudal aristocracy has become a class contradiction. In terms of drama, Williams thinks that on the one hand, it is more exquisite and spectacular than the previous form, and this form has been closely connected with the commercial entertainment form; on the other hand, the form of drama shows new purport and new evaluation standard, which is full of satire and criticism to the feudal dynasty from the whole content and style." The drama with comedy as the expression style highlights the old traditional customs abandoned by the new personal experience during the decline of the dynasty, and the drama with tragedy as the expression style highlights the class contradictions and various social conspiracies in the social development." Although the "heroism" at this time is still left in the development of the drama plot, the "hero" in the drama not only has no ability to solve the social contradictions, but also is restrained by the social contradictions in the drama, and finally exits with tragic images. Throughout the middle of the 17th century, English drama developed from an original national drama to a class drama in the evolution of this social contradiction.

### 4. THE DEVELOPMENT OF ENGLISH DRAMA HAS BEEN INFLUENCED BY THE BOURGEOIS IDEOLOGY SINCE MODERN TIMES, WHICH HIGHLIGHTS THE INNER FEELINGS OF THE MIDDLE CLASS AND THE DECLINING ARISTOCRACY

In the 18th century, Williams believed that English drama was particularly complicated in form and content, because for many dramas, both in form and style, the factors of religious nature, feudal aristocratic nature, personal experience and human ethics were integrated. William's thought comes from his detailed analysis of the audience of the drama. Since the 18th century, the number of businessmen has increased steadily as the audience of the drama. A few declining feudal aristocrats have become the ordinary middle class and become one of the audience of the drama. At that time: "Some elements of the rising middle class were added to a still fashionable theatre audience, and the public tone of court and aristocracy itself was modified. A lot of writers are starting to jump out of the business middle class..."[4] To be fair, an important part of the 18th century drama was to provide a conscious image of the middle class and its virtue, but the creative potential of this new consciousness was uneven. Especially in drama, they are more restricted. The instability of the dramatic form combined with the fashion-chasing atmosphere in the audience, so that people's interest is focused on the actors. In this way, the value of the plays seems to be that they are primarily tools of special acting, and the

plays become an inclusive mixture."Williams analyzed the cause of this dramatic phenomenon, and thought that the cause did not come from the drama itself, but from the class change of the society at that time, specifically, the influence of the new class on the political and economic life of the society.As early as the middle of the 16th century, with the development of the feudal economy, the gentry, merchants, and other members of the non-royal aristocracy with money began to get in touch with each other frequently, and formed an organization and a team. In this organization, although these members had different origins, they had similar goals and similar life experiences, and in the common development, the distinction between them became increasingly difficult to distinguish.They possess more wealth than the poor, and have more or less contact with the upper class in their struggle, so that they do not belong to the poor people are not inclusive of the royal aristocracy, they have been trying to get more money and status, but in countless struggles and struggles, they can not get rid of this middle status.

In William's theory, middle class has become very common in England in the 18th century, especially in the 19th century, the middle class has become a formal social group in English social practice.Under the background of the industrial revolution in the 19th century, the feudal social structure of England was broken by the flow of economy and capital. The old economic model had not adapted to the new economic demand. The tertiary industry, as a new industrial situation, gradually developed and matured. People of different classes had more opportunities for communication. Under the pursuit of the same interests, the capitalists, small traders and ordinary people had relations.During this period, the whole UK was in a process of urbanization. A large number of managers, business personnel and government personnel came from the middle class, whose social status and political power had been gradually recognized by the society.Williams found that in the socio-economic development, the British theatre industry had a superficial growth. In 1800, there were five theatres in London, and there were more than 40 theatres in each county. By 1850, there were more

than 20 theatres in London, and there were more than 50 theatres in other counties. By 1900, there were more than 60 theatres in London, and there were more than 300 theatres in each county.On the face of it, the British drama industry has grown in scale, but Williams is not optimistic.He found that there had been little development and progress in the content and form of drama during the past 100 years, and that the number of printed works of drama literature had increased significantly during this period.Although in this period, the development of English drama still shows creativity, but this kind of creativity still stays in a low level, most of the drama content is the past farce, pantomime and comic drama.Williams believed that from the middle of the 18th century to the middle of the 19th century, the development of English drama was only formal rather than substantive, which was related to the structural changes of the society at that time.The formation of the middle class was the most prominent content of the social structure change at that time. The formation of the middle class did not change the affiliation and distribution of the whole social politics and economy, whether from the poor group or the declining royal aristocracy.Neither the class consciousness of the middle class nor the class consciousness of the bourgeoisie or the proletariat had matured, and the whole middle class seemed to show the characteristics of all social strata at that time.The drama at that time, as a form of social development, reflected the characteristics of social structure and stratum in form, the complicated diversity in form and the stagnation in essence.

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# Research on the Construction of Sichuan and Chongqing Tourism Circular Economy Corridor based on the Theory of Landscape Ecology

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**Abstract:** The construction of twin-city economic circle in Chengdu-Chongqing region will contribute to the construction and development of tourism circular economic corridor. Based on the analysis of the current status and conditions of the construction of the Sichuan-Chongqing tourism corridor, we use literature research method, case study method and system research method, with the help of landscape ecology theory, the basis of ecological tourism corridor construction in Sichuan-Chongqing economic belt is analyzed and the framework of Sichuan-Chongqing tourism circular economic corridor is designed. On this basis, it is proposed to promote the development of Sichuan-Chongqing tourism cooperation project, increase the financial support for the construction of tourism corridor, strengthen the cultural publicity of Sichuan-Chongqing cultural tourism, and promote the research and application of tourism-related technologies.

**Keywords:** Landscape ecology; Corridor construction; Tourism circular economy; Sichuan-Chongqing region

## 1. INTRODUCTION

The sustainable use of tourism resources has become an important factor in the sustainable development of tourism. At present, circular economy has been widely promoted not only in the fields of industry, agriculture and urban development, but also in the fields of ecotourism and tourism planning. From the perspective of landscape ecology, this paper discusses in detail the implementation path of circular economy corridor construction in Sichuan and Chongqing tourism, aiming to provide some reference for the economic development of Sichuan-Chongqing tourism, the construction of urban corridors and natural ecological environment, and the coordinated development of social environment[1].

## 2. PRINCIPLES OF LANDSCAPE ECOLOGY AND THEIR APPLICATION IN THE CIRCULAR ECONOMY OF TOURISM

### 2.1 Principles of landscape structure and function

Landscape ecology uses the basic model of patch, corridor and matrix to describe the structure of a landscape, and the related concept of edge. Landscape functions refer to the flow of energy, species and nutrients between landscape elements. Landscape functions include primarily corridor, matrix and patch features. In this way, ecotourism can be further explained by specific locations and specific pathways. These flows are focused on flows of passengers, logistics, money, information and value flows brought by tourists.

### 2.2 Theory of ecological wholeness and spatial heterogeneity

Ecological integrity considers that a landscape consisting of organic connections of landscape elements has a hierarchical structure with independent functional features and distinct visual characteristics. The whole part is a multi-part landscape system, which is the basic idea of the principle of ecological integrity. The spatio-temporal distribution of landscape elements in the landscape matrix, patches, corridors, plants and animals is always heterogeneous. This heterogeneity constitutes the heterogeneity of the landscape. Heterogeneity is the basis of landscape function and determines the diversity of spatial patterns.

### 2.3 Theory of landscape diversity and stability

Landscape diversity focuses on the structural and functional diversity of patches in terms of their number, size, shape, type, distribution, connectivity and connectedness. It is widely accepted that diversity in the landscape leads to stability[2]. A tourism ecosystem is a non-independent landscape ecosystem. Various types of ecosystems constitute a heterogeneous landscape pattern, forming different tourism landscape functions, and the stability of the tourism landscape reaches a certain level, thus ensuring the realization of landscape tourism functions. The stability of the tourism landscape not only reflects the degree of natural and human interference, but also is one of the necessary conditions and indicators for the sustainable development of urban tourism.

### 3. SPATIAL STRUCTURE OF THE TOURISM CIRCULAR ECONOMY CORRIDOR IN THE SICHUAN-CHONGQING ECONOMIC BELT

#### 3.1 The "dual-core" structure

Chongqing and Chengdu are the two largest cities in western China, the two largest twin constellations in the twin-city economic circle of the Chengdu-Chongqing region, and the two cores of the Sichuan-Chongqing economic circle. According to the regional planning of Sichuan-Chongqing Economic Zone, the overall layout of Sichuan-Chongqing Economic Zone is "twin cores and five belts", the twin cores being Chengdu and Chongqing, which are the important political, economic, cultural and tourism centers in western China. The two cores are Chengdu and Chongqing, which are important political, economic, cultural and tourism centers in western China. They have excellent geographical environment, rich resources, dense population, convenient transportation and strong industrial bases. These two places are not only rich in natural resources, but also have a long history and have preserved a large amount of cultural heritage, which is ideal for the development of eco-tourism.

With good geographical location, strong central radiation, close cooperation, complementary advantages, cultural support, mutual economic assistance and political exchanges, Sichuan and Chongqing are partners in the construction planning of the tourism circular economic corridor, and both sides can jointly coordinate the ecotourism development of both places and promote the ecotourism development in the Sichuan-Chongqing Economic Zone. Therefore, based on the outstanding advantages and characteristics of the two regional regions, the dual-core layout of the tourism circular economic corridor in the Sichuan-Chongqing Economic Zone can be constructed on this basis. Making full use of the ecological tourism resources in the Sichuan-Chongqing Economic Zone, a twin-core linkage will be formed to continuously broaden tourism channels and expand the surrounding areas, forming a complete twin-core ecological tourism corridor network system.

#### 3.2 Three corridors of tourism

The corridors are the tourism circular economy corridor along the railway lines of Sichuan and Chongqing, the tourism circular economy corridor along the highway lines and the tourism circular economy corridor along the waterways.

##### 3.2.1 Circular economic corridor for tourism along the railway line

The tourism corridor along the Sichuan-Chongqing Railway is a tourism corridor along the Chengdu-Neijiang-Chongqing Railway, which mainly follows the layout of the Chengdu-Chongqing High-speed Railway, with relatively flat and open terrain along the central towns of Ziyang, Neijiang, Rongchang and Yongchuan. The corridor along the railway is

well suited for the development of eco-tourism in the villages along the route. The main nodes of the corridors are tourism and recreation centers, which bring together various conditions for tourists to carry out ecotourism, providing both ecotourism attractions and space for tourists to stay, play and rest. Tourism corridor nodes along the high-speed railway, such as Ziyang, Neijiang, Rongchang and Yongchuan, are the main tourism and leisure hubs along this corridor.

##### 3.2.2 Tourism circular economy corridors along highways

This corridor is dominated by the Chengdu-Chongqing Ring Road, linking more than 30 major cities and regions in the Sichuan-Chongqing region, mainly including the Chengdu-Ya'an-Meishan-Leshan-Yibin-Luzhou-Hejiang-Chongqing (Jiangjin, Tongliang, Tongnan) Suining-Miangyang Expressway. Through joint development of ecotourism resources in major nodes and areas such as Ya'an, Leshan, Yibin, Luzhou, Suining and Miayang, ecotourism destinations of different scales, types and levels will be formed. Based on the ecological tourism attractions with various characteristics such as boutique parks and rural sightseeing parks, the sustainable development of the circular economy of tourism in Sichuan and Chongqing will be promoted through the gathering and integration of the corridor[3].

##### 3.2.3 Tourism circular economy corridors along waterways

The Chengdu-Leshan-Luzhou-Chongqing Water Tourism Circular Economic Corridor is mainly developed and constructed based on the Chengdu-Leshan Min River Channel and the Yibin-Luzhou and Chongqing Yangtze River Channels. The natural ecological landscape of the Yangtze River, such as Changshou Lake, Fengjie Tiankeng, the Three Gorges of the Yangtze River, Wushan Mountain, and the Shu Nan Bamboo Sea, is fully utilized to further build the "Chongqing-Sichuan Yangtze Golden Waterway". In short, the water tourism circular economic corridor of Sichuan and Chongqing mainly makes use of the navigable channels of Min River and Yangtze River, as well as the characteristics of ecological tourist attractions along the Yangtze River to build a water ecological tourism corridor with tourism experience.

### 4. COUNTERMEASURES FOR THE CONSTRUCTION OF TOURISM CIRCULAR ECONOMY CORRIDORS IN THE SICHUAN-CHONGQING ECONOMIC BELT

#### 4.1 Establishment of institutional safeguards for the construction of circular economy tourism corridors in the Sichuan-Chongqing Economic Belt

The construction of a tourism circular economic corridor in the Sichuan-Chongqing Economic Belt is a large and complex tourism spatial plan. Its construction requires a series of processes such as planning, design, evaluation, implementation, testing

and improvement. Therefore, it is necessary to establish a scientific system guarantee that is conducive to the planning and implementation of the tourism circular economy corridor in the economic belt. Relevant personnel training system, job staffing and equipment allocation system, corridor facility maintenance control system, regional safety responsibility system, tourism environmental protection system, and accident emergency response system should be established.

4.2 Constructing a resource protection system for the tourism cycle economic corridor in the Sichuan-Chongqing economic belt

First, it has established a management system to safeguard the system. Second, to establish a management and supervision layer of the circular economy system, to protect circular economy tourism resources, to clarify management responsibilities and regulations, to effectively implement, fully communicate, summarize and provide feedback, and to improve management effectiveness. Third, the establishment of a circular economy engineering protection system. Fourth, establish a social and public safety system.

4.3 Strengthening the optimal configuration of nodes in the tourism circular economic corridor of the Sichuan-Chongqing economic belt

The main configuration of the tourism circular economy corridor in the Sichuan-Chongqing economic belt is to mainly form the collection and configuration of tourism circular economy resources, improve service and reception facilities and transportation hubs. The construction of the tourism

circular economy corridor is to make the tourism resources of Sichuan and Chongqing areas fully protected and sustainable. Therefore, in addition to the complete configuration of tourism elements such as sightseeing, accommodation, leisure, shopping and entertainment, the configuration of each node needs to be optimized under the premise of technical operation and facility layout to make the layout more scientific and orderly.

#### ACKNOWLEDGEMENT

This paper is supported by the Humanities and Social Sciences Project of the Ministry of Education (19YJC630161); Science and Technology Research Program of Chongqing Municipal Education Commission (KJQN202001308); Sichuan Province Cyclic Economy Research Center Project (XHJJ-1413); Research Project of Sichuan Cuisine Development Research Center (CC21G17)

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# An Empirical Study on Factors Influencing Consumers' Behavior in E-commerce Environment

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**Abstract:** In recent years, with the development of the society, China has entered the information age, and the e-commerce industry has also made rapid progress. At present, there are traces of the existence of e-commerce in many aspects of the society, and it has also been widely used in many fields. Under the influence of the e-commerce environment, people's various consumer needs have been met, and people can shop without leaving home. The impact of e-commerce on traditional consumption forms will become an important direction of researches on consumer behavior in the future. In this context, this paper explores and studies the factors affecting consumers' intention of and attitude to online shopping by using the methods of factor analysis and single factor interview analysis, and analyzes the relationship between them and the differences of these factors on consumers.

**Keywords:** E-commerce; Consumer behavior; Influencing factors

## INTRODUCTION

The rapid development of information and economy has led to the continuous progress of e-commerce. At present, most people generally prefer to online shopping. Through the use of Internet technology, a convenient trading platform is provided for consumers and suppliers, namely e-commerce. The main advantage of e-commerce is that the supplier and the consumer do not need to transact through an intermediary. They only need to communicate through mobile devices such as computers, which is convenient and low in cost. Since there are many factors that affect consumer behavior, this paper analyzes the factors that affect consumer behavior in the e-commerce environment.

### 1. CHARACTERISTICS OF CONSUMER BEHAVIOR IN E-COMMERCE ENVIRONMENT

1.1 Convenience of consumption and various types  
Compared with the traditional business model, consumers' online consumption will not be limited by time and space. Consumers can choose goods and services according to their own needs at any time and anywhere. Moreover, in the past, consumers' consumption behavior was affected by the marketing environment, which limited the choice of goods [1].

E-commerce is based on powerful network that provides a trading platform for both consumers. The network has a strong ability to process information, so consumers have more choices for goods.

### 1.2 Enhancement of participation in commodity production and circulation

Under the traditional marketing mode, the products consumers choose to buy are finished products, and the products designed and manufactured by enterprises are delivered through different sales channels. It is disadvantageous for consumers to express their needs and wishes for products, but due to the limitations of many factors, consumers' personalized needs can not be met through enterprises. The normal circulation of products needs the cooperation of consumers and producers, as well as middlemen who play an indispensable role. However, with the rapid development of e-commerce, the circulation of goods does not need the existence of middlemen. Both producers and consumers can circulate the products, and consumers can also participate in product design according to their own needs and require enterprises to produce their satisfactory products.

### 1.3 Concern about brand of products

The image of an enterprise is created by its own strength and external performance. A good corporate image can be recognized by consumers. Under the traditional marketing mode, enterprises pay great attention to the creation and maintenance of popularity and reputation. At present, in the context of e-commerce, consumers' purchase behavior is also affected by the corporate image. The purchase of goods on the network makes consumers unable to make a correct judgment on product quality and service quality. Therefore, most consumers still choose to buy products with a certain corporate image.

### 2. FACTORS AFFECTING CONSUMER BEHAVIOR IN THE E-COMMERCE ENVIRONMENT

#### 2.1 The influence of consumers themselves

Consumers' desire to buy and their attitudes to purchase will have an important impact on their consumption behavior. Both traditional offline commodity transactions and online transactions under

the influence of the e-commerce environment will be affected by consumers themselves. The quality and price of commodities will also affect consumers' buying attitude, and their desire to buy will also change accordingly. In addition, consumers' own shopping experience will also affect their purchasing behavior in the e-commerce environment. If consumers are not in a more pleasant mood when purchasing goods, they will take more detailed considerations when choosing goods. A low mood will even lead to consumers not in the mood to buy goods, which is likely to lead to transaction failure. Conversely, if consumers choose and purchase products in a happy mood, they will effectively stimulate their desire to purchase and may purchase more products. It can be seen that consumers themselves will affect their purchase behavior in the case of e-commerce [2].

### 2.2 The influence of environment

In the e-commerce environment, the corporate brand, service, and price of the products, as well as the characteristics of the product itself, will affect consumers' consumption behavior. Firstly, consumers' choice of commodities is greatly affected by the price of commodity that is one of the main factors affecting consumer behavior. At the same time, consumers' selection of goods, the scope of purchase, and the actual quantity of goods purchased are also determined by the price of the goods. Under normal circumstances, consumers will purchase high-quality and low-cost products. If consumers encounter good services in the process of product selection and purchase, it will be a good shopping experience for consumers. In addition, in the e-commerce environment, if consumers see that the price of a product is different from the price they expect, they will not only consider the safety of the products, but also the quality of the products they want to buy. If the products are relatively difficult to be returned or exchanged, they are more willing to go to brick and mortar stores to purchase products after experiencing the products themselves.

Finally, in terms of cognitive risk, with the rapid development of e-commerce, when consumers choose products on the network, in addition to detailed understanding of the product profile, they will also ask about the relevant information of consumers' goods with purchase experience on the network platform. And they also browse customer reviews and buyer shows. Consumers evaluate product quality and business reputation through the above methods, and finally decide whether to purchase the products.

## 3. REASONS AFFECTING CONSUMERS' CONSUMPTION BEHAVIOR IN E-COMMERCE ENVIRONMENT

### 3.1 Design style of shopping website

From a certain point of view, human beings are a kind of visual animals. If the page design style of the

shopping website is fashionable and novel, it will attract consumers to browse and select the goods in the website to a certain extent and increase their preference for the platform. And consumers' purchase of goods on satisfactory web pages can effectively improve consumers' satisfaction. In other words, if consumers enter a shopping web page and find that the design style of the web page is not in line with their aesthetics and are not satisfied with this type of page, it will directly lead to the rapid decline in the click views of the web page, and consumers' purchase desire can not be generated. Therefore, the design of shopping web pages should conform to the public's aesthetics, keep up with the pace of fashion, and be conform to the enterprise marketing concept [3].

### 3.2 Characteristics and types of sold goods

The types and characteristics of products sold on the website directly determine whether consumers will buy goods through network channels. In the traditional marketing mode, the emergence of a brand with popularity and cultural connotation needs many years of practice and exploration. However, the development of online brands is different from that of offline brands. Under the influence of e-commerce environment, the shaping time of commodity brands is effectively shortened. For example, JD.COM, a very popular website, has been widely loved by everyone by selling some goods with quality assurance and lower prices than brick and mortar stores, so it has developed rapidly. Only high-quality and low-cost goods can better meet the needs of most consumers, which is one of the reasons why JD can be based on many websites.

### 3.3 Lack of network security

Only when the shopping risk of e-commerce platform is effectively reduced, will more consumers be willing to conduct online transactions. The security and reliability of network is the main obstacle to the good development of e-commerce platform. The development of network has two sides. On the one hand, it is conducive to people's better life. On the other hand, it will pose a threat to people's information and property because of its concealment. At present, consumers' concerns about network security are mainly whether their personal information, account information, and operation authority are reliably protected. Because some websites have no awareness of potential security risks, consumers will worry about whether their accounts will be stolen or funds will be stolen during payment [4].

## 4. CONCLUSION

In summary, the rapid development of our country's technology and economy has promoted the continuous progress of e-commerce, and the emergence of e-commerce has also caused important changes in people's consumption behavior. It has now surpassed traditional offline channels and has become the first choice for people to shop. Relevant

discussions on the influencing factors of consumers' behavior can promote faster and better development of e-commerce.

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# Implementation of Aesthetic Education in Chinese Language and Literature Teaching

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**Abstract:** Chinese Language and Literature is an important part of the current education. It is mainly to cultivate students' language expression ability, and enhance their cultural literacy. It plays a positive role in shaping the core literacy of students, and it is also an important way to publicize and promote Chinese traditional language and culture. Therefore, we should actively pay attention to the teaching of Chinese language and culture and explore the ways to play its core role in education, so that students can get the cultivation and development of aesthetic ability in the teaching of Chinese Language and Literature.

**Keywords:** Chinese Language and Literature; Aesthetic education; Implementation countermeasures

## INTRODUCTION

As a representative of Chinese culture, Chinese language has played an important role for a long time. Correctly carrying out Chinese language and culture teaching in the education can promote the improvement of students' aesthetic appeal and enable students to get all-round development through the education [1]. In terms of the current development of Chinese Language and Literature teaching, there are serious problems in aesthetic education, which seriously hinder the role of Chinese language and culture teaching. At present, we need to correctly understand the problems, actively formulate relevant countermeasures, and strive to promote the effective implementation of aesthetic education in Chinese Language and Literature teaching.

### 1. THE MEANING AND FUNCTION OF AESTHETIC EDUCATION

The so-called aesthetic education is to carry out educational work through artistic means, and make full use of the charm of teaching content to encourage students to actively participate in the teaching, so that students can obtain the sublimation of mind, behavior, posture and culture. For the Chinese Language and Literature that students have little contact with, aesthetic education is to enable students to understand Chinese language and literature, form a correct sense of judging Chinese language and literature, and then grow up comprehensively and healthily [2].

The key to the promotion of aesthetic education lies

in shaping and cultivating students' aesthetic ability, helping students to better feel the charm of other cultures including Chinese language and literature, having a positive effect on the display and inheritance of cultural charm. In addition, it also plays a positive role in the exercise of students' thinking ability and the cultivation of students' creativity, which is the key to realize the all-round and healthy development of students.

### 2. IMPLEMENTATION COUNTERMEASURES OF AESTHETIC EDUCATION IN CHINESE LANGUAGE AND LITERATURE TEACHING

#### 2.1 To enhance the fun of classroom teaching

Stimulating students' interest in learning has always been the key research content of educational work. In the process of carrying out actual teaching, educators can enrich teaching contents and teaching methods to stimulate students' interest in classroom learning, and then students will participate in classroom teaching with full enthusiasm. The course of Chinese Language and Literature is different from other courses. It is difficult to give full play to the interest of teaching, so teachers should actively learn advanced teaching methods and apply them to classroom teaching [3]. For instance, when teaching the content of Thunderstorm, teachers can invite some students to play roles in classroom teaching to enrich the interest of classroom teaching. Through the role playing, students can feel the charm of Chinese language in the process of participating in classroom activities, and ignite their love for Chinese language and literature. In poetry teaching such as Farewell to Cambridge, students can be organized to perform recitation, and teachers act as judges to score students' recitation. Competitive activities can directly stimulate students' desire for performance, competitiveness and curiosity, and increase the interest of classroom teaching. In the teaching of mythological articles like In Pursuit of the Sun, teachers can find similar resources on the Internet and present them in classroom teaching by using multimedia technology, which gives students double stimulation in vision and hearing, so that students' attention is completely attracted, and finally successfully achieve the goal of Chinese Language and Literature teaching [4].

#### 2.2 To make students as the domination

At present, classroom teaching is still the main way

to carry out aesthetic education. The new curriculum reform emphasizes the importance of giving full play to students' dominant position in classroom teaching. Based on this, in order to improve the effect of aesthetic education, we must pay attention to students' dominant position in aesthetic education, and give full play to students' subjective initiative. While teachers play the role of inspiration and guidance to encourage students to form a good sense of aesthetics, and enable students to take the initiative to learn and improve their own abilities [5]. For example, in the teaching of *Travelling Is Hard*, the classic sentence that *One day I'll skim the waves, blown by the wind, With sails hoisted high, across the vast ocean* contains the understanding and ideas of many poets, which is difficult for students to understand the artistic conception. In view of this situation, teachers can use multimedia technology to present the scenes depicted in the poem and ask students when to quote the poem. It can arouse students' thinking, and students can also have a clearer grasp of the emotion in the poem in the process of participating in the question answer. Finally, teachers make correct comments on students' answers and encourage students to correctly quote this poem when encountering similar scenes. In this way, students become the domination of classroom teaching and their aesthetic ability has been significantly improved.

### 2.3 To carry out targeted teaching

Targeted teaching is divided into two aspects. On one hand, the teaching needs to be carried out according to the characteristics of students, so that students can maintain a high degree of participation in the teaching process. Extroverted students have a strong desire for performance and dare to recite and perform in public. Thus teachers can invite them to perform recitations and role-plays in classroom teaching, so that students can feel the beauty of Chinese language and literature in the process of recitation, and form a correct understanding of Chinese language and literature. For students with strong creative ability, teachers need to give them enough platforms and opportunities to show themselves, and encourage them to make literary creation and literary appreciation and to deeply experience the clever words and deep connotations in literary works. For introverted students, teachers should give enough encouragement and support to help them open their hearts, so that students are able to actively apply the Chinese language and literature they have learned to their daily life. On the other hand, it is reasonable to choose literary works to carry out teaching. Today, with the rapid development of Internet technology, students have more opportunities to contact and learn Chinese language and literature, and there is a situation where the learning ability of Chinese language and literature varies. Therefore, it is necessary to combine the overall learning situation of

the students in the class to carry out the teaching of Chinese Language and Literature. In addition, there are currently a large number of literary works. After completing the teaching of Chinese Language and Literature according to the content of the textbook and stimulating students' interest in learning, teachers should correctly guide students to choose literary works. Literary works are required to have strong literary value within the scope of students' cognition, so that students can better accept and read Chinese language and literature, feel the value of literature in the process of reading, and produce unique gains. Finally, aesthetic education must be combined with real life, so that students can truly empathize when learning related literary works, and have a deeper understanding and acceptance of the content of literary works, which is also one of the ways to improve the effect of aesthetic education through targeted teaching.

### 3. CONCLUSION

To sum up, the implementation of aesthetic education in Chinese Language and Literature teaching plays an extremely important role. As educators, in the process of carrying out Chinese Language and Literature teaching, they need to correctly understand its significance for students' development, so as to grasp the current situation of Chinese Language and Literature teaching. In addition, they should strive to implement relevant countermeasures to promote the implementation of aesthetic education, stimulate students' interest in learning, help them feel the charm of Chinese language and literature and actively participate in the learning of Chinese language and literature, and finally improve students' aesthetic ability, innovative ability and thinking ability. In this way, the value of Chinese Language and Literature teaching in educational work can be given play to, and the educational goal of students' all-round and healthy development can be realized.

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# Keep the Chinese Communists' Insistence on Historical Heart

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**Abstract:** On February 20, 2021, the party history learning and education mobilization conference was held in Beijing, meeting mainly around the main line of the Centennial historical development of the Communist Party and the theme of party history learning and education. Reviewing history, observing the present and looking forward to the future. The meeting demonstrated to the whole Party and the people of all ethnic groups that the Chinese Communists do not forget their original heart, remember their mission, not forgetting history, and grabbing the revolutionary character and firm will. Expressed Chinese Communists adhere to the correct world view of the history, and always insist the value of the heart of history. It is of great significance for developing Marxism in the 21st century, achieving the "second hundred years" struggle, building socialist modern countries, etc.

**Keywords:** The Communist Party of China; Party history study and education; History; Historical view; The heart of the history

## INTRODUCTION

"This year marks the centenary of the founding of the Communist Party of China. In the whole party, the party's history of learning is a new starting point of the Party Central Committee. The Great New Year's History of the Party Central Committee is the overall change of the Chinese nation's great revival strategy and the world's hundred years. The whole party is full of confidence to build a socialist modern country. The major decisions made."(Xi 1) On February 20, 2021, the Party history Study and Education Mobilization Conference was held in Beijing (Hereinafter referred to as: conference), The conference height summarizes that the Chinese Communist Party has been born in 1921, it has led the Chinese people in the road for the communist cause. After the burning, the gods, the thorns, the great achievements of the ancestors, and the great achievements of ancient times. In modern times, China has continuously growing with the footprints in historical development and changes, summing up the successful experience and lesson revelation of history. The conference is the main line of the Communist Party of China, and the party history education is placed in the political and daily life of party members of the Communist Party of China as an important political task. The conference is highly demonstrated by the reality,

connecting history, learning theory, paying attention to practices. The Chinese Communists have deeply grasped the law of human social development and the law of China's social history. The Chinese Communists established and adhered to the correct historical concept in the in-depth thinking and practice of a hundred years of historical development, and always maintains the beginning color and value of history.

## 1. ADHERING TO THE HEART OF HISTORY, WE SHOULD TAKE HISTORY AS A MIRROR AND CORRECTLY UNDERSTAND HISTORY

Ancient China had a glorious history of thousands of years, and the Chinese nation had created a civilization leading the world. However, when history entered modern times, China fell behind. After the Opium War in 1840, China began to become a semi colonial and semi feudal society. Countless Chinese people with lofty ideals began to explore the road of saving the country and the people, and tried to find ways of people's Liberation and national independence. However, they all ended in failure in the end. The October Revolution led by the Russian people brought scientific Marxist theory to China. Marxism has made a profound and great change in the thoughts of many young people in China, especially many intellectuals participating in the new culture movement began to contact and learn Marxist theory, This also laid a solid ideological foundation for the birth of the Communist Party of China. Since the founding of the Communist Party of China in 1921, the Communist Party of China has become a participant in the great cause of understanding and releasing all mankind, a believer in realizing communism, and a practitioner in developing and perfecting the cause of Chinese revolution, construction and reform. From the past to the present, the Chinese nation and the Chinese Communists have accumulated in history, struggled in history, never forgotten history and their original heart, used history as a mirror to illuminate reality and strive to move forward.

The conference pointed out that "take history as a mirror and history as a driving force... Stimulate the confidence and driving force to strive for the great rejuvenation of the Chinese nation, move forward bravely regardless of rain or wind, and create a great historical cause belonging to all the Chinese people."(Xi 7) Taking history as a mirror and

correctly understanding history, on the one hand, we should fully understand the real history of the Communist Party of China and China in the past, correctly analyze and summarize the current world development situation, and scientifically predict and grasp the development trend of future society; On the other hand, it is necessary to clarify the objectives of the proletarian political party, clearly adhere to and develop socialism with Chinese characteristics, and strengthen the lofty ideal of communism and the common ideal of socialism with Chinese characteristics, which is the banner of the struggle of the whole Party and the people of all ethnic groups. As the original Marxist classic says, "A political party that knows what it wants and how to achieve what it wants, a political party that really wants to achieve this goal and has the tenacious spirit necessary to achieve this goal - such a political party will be invincible." (Compiled by the Bureau of compiling works of Marx, Engels, Lenin and Stalin of the CPC Central Committee. Complete works of Marx and Engels (Volume 39) [M]. Beijing: People's publishing house, 1974 : 139) Finally, on the one hand, we should suck nutrition from history and remember the experience and lessons of history while retaining the glory of history. "If you want to be poor for thousands of miles, go to a higher level", gather the wisdom of years, accumulate the strength to move forward, stimulate the pace of progress from history, persevere, forge ahead and make progress, constantly push forward the cause of the Communist Party of China and the Chinese people, and give satisfactory answers to history and the people.

## 2. ADHERING TO THE HEART OF HISTORY, WE SHOULD USE HISTORY TO SET UP A GREAT VIEW OF HISTORY

History is the best teacher. "No matter where you go, you can't forget the way you came in the past." (Xi 3) Looking back on the 100 year history of the Communist Party of China, the Communist Party of China was born, grew, accumulated and expanded in history. Know where to come from and where to go. In a sense, the 100 year history of the founding of the Communist Party of China is a process of continuous development, creation, review and summary. Therefore, we should not only look forward to the high road ahead, but also look back on the struggle road in the past.

Take history as the driving force to stimulate progress and establish a grand view of history. First of all, we should correctly study and understand the history of the Communist Party of China. The correct party's view of history requires us to record history with historical materialism, adhere to the ideological line of seeking truth from facts, adhere to the truth, support the truth, fight for the truth, throw away false history, and build the historical truth and conclusion on the basis of scientific research and accurate historical facts and materials. To establish a grand

view of history, "we need to analyze and put forward problem - solving methods and strategic strategies in grasping the law of global development in combination with the dimensions of historical development and the development of the times." (Xi 14) Secondly, we should be good at constantly summing up experience and drawing lessons. History goes from yesterday to today step by step. Today can go further tomorrow step by step. Yesterday, today and the future are like mountains and mountains; The past, present and future are like continuous rivers. "Chinese revolutionary history is the best nutrient", Paying attention to yesterday and past history, learning yesterday and past history, and studying yesterday and past history will give us wisdom and enlightenment and give us guidance and direction for tomorrow and the future. Finally, we should carry forward the revolutionary spirit to the greatest extent and continue the red gene. "The great rejuvenation of the Chinese nation can never be achieved easily." (Xi 7) In the past 100 years, the Communist Party of China has forged a great spirit and formed a glorious "red gene", which brings the courage and strength for the Chinese nation to move forward and develop. In the future, it will continue to inherit the revolutionary spirit and carry forward the fine traditional virtues. In this way, it will be able to achieve new and greater miracles on the new great journey.

## 3. ADHERING TO THE HEART OF HISTORY, WE SHOULD ADHERE TO THE TRUTH AND HAVE THE COURAGE TO PRACTICE

The heart of history is that Chinese Communists need to often think about history, respect history, cherish today and create the future on the basis of understanding historical facts. The heart of history is that the Communist Party of China, in the new stage of development and the new historical period, adheres to unity and leading the people of all ethnic groups in the country not to forget the past, adhere to learning, adhere to struggle, create the future and realize the people's better life. Qian Mu, an academician and historian of the Academia Sinica, and Chen Yinke, a master of traditional Chinese studies, have all used the Chinese people's historical heart, that is, to believe in the real history and carry forward the essence of Chinese cultural tradition. In any case, history is always better than one generation. We should learn and be familiar with the history of the Communist Party of China, "In general, we should learn the truth, increase confidence, enhance moral character and be brave in practice." (Xi 11) The Communist Party of China was born in a difficult time of foreign aggression and has experienced the test of wind and rain. It reviews and summarizes the road of the Communist Party of China leading the Chinese people in revolution, construction and reform. It requires us to adhere to the truth and have the courage to practice. Practice, cognition, re practice, re cognition, learning theory

finally needs to be implemented into specific actions. As the meeting said, "we should turn learning results into work motivation and results"(Xi 25).

The Communist Party of China United and led the whole Party and the people of all ethnic groups to fight bravely, ride the wind and waves, win the victory of the new democratic revolution, establish new China, and make the Chinese people stand upright; The establishment of a socialist system, the implementation of great reform and opening up, and the socialist modernization drive have made the Chinese people rich; Today, in the new era, our party has led the people to go all out and fight as quickly as possible. On the centennial of the founding of the Communist Party of China, we have won the great battle of poverty alleviation on schedule and in an all-round way, with fruitful results and remarkable achievements, and created the Chinese miracle of human poverty reduction. This is a great historical achievement. In the process of adhering to and applying Marxism and the specific reality of China's revolution, construction and reform, the Communist Party of China has produced a series of creative theoretical achievements in the Sinicization of Marxism and led the Chinese people towards the goal of the "second century", which is a powerful demonstration of the Chinese Communists' adherence to truth and courage to practice in history. It is a fine tradition of the Communist Party of China to be good at learning history, summarizing history, adhering to the way of historical thinking, adhering to truth and daring to practice. A proverb once said: when a person loses his memory, he loses himself. When a country and nation loses its history, it loses its reality and future. It is in the historical journey of constant search, pursuit and struggle that the Communist Party

of China and the Chinese people created the precious success of the Chinese revolution, achieved the happy life of the Chinese people, and finally cast the immortal Chinese civilization, national spirit and character of the times.

To sum up, the party history learning and education mobilization conference was successfully held. The conference deeply interpreted the character and ideal of the Chinese Communists who did not forget their original heart, remembered their mission, adhered to the way of historical thinking, adhered to the correct view of history and worked hard with history and reality. The convening of the conference is in line with the development of the times and the real history, reflects the realistic thought, runs through the wisdom of truth, and guides a clear direction for the future of the Communist Party of China. The road is down, the sun is ahead, the scenery is good and the future is bright. Keep the Chinese Communists' insistence on historical heart, we should establish a correct world outlook, outlook on life and values in learning the party's history. This will surely ignite the torch of realizing the ideal of the great rejuvenation of the Chinese nation and bring peace, development and happiness to the people of the world.

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# Analysis of Treatment Methods of Income Tax Accounting in the Process of Corporate Merger and Reorganization

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**Abstract:** Corporate mergers and acquisitions have always been favored by the capital market. For companies, mergers and acquisitions are an important way to optimize their capital, as well as a key way for the effective continuation of the current modern corporate system. The issue of income tax accounting will be involved in the merger and organizations of enterprises. As mergers and acquisitions and reorganizations have set off a lot of money on a global scale, the research on this issue has attracted more and more attention from economists. This paper focuses on the relevant theories of enterprise mergers and reorganizations and the relevant theories of income tax accounting, summarizes and elaborates the treatment methods of income tax accounting in enterprise mergers and acquisitions.

**Keywords:** Corporate merger and reorganization; income tax accounting; countermeasures

## INTRODUCTION

Judging from the current social and economic development situation, corporate mergers and reorganizations have gradually become an important means for their external expansion and rapid development. For a developing company, they are bound to merge and reorganize economic enterprises to realize the effective combination of internal and external enterprises to maintain its long-term development [1]. The processing of income tax accounting has always been the main role that restricts the effective progress of corporate mergers and reorganizations, and will directly affect the completion and final results of corporate mergers and organizations. Therefore, it is necessary to carry out in-depth exploration of the relationship between corporate mergers and reorganizations and income tax accounting, and summarize appropriate treatment countermeasures of income tax accounting, so as to ensure the orderly realization of the long-term and stable development of the enterprise [2].

## 1. RELATED THEORIES OF INCOME TAX ACCOUNTING

Accounting is the accounting of relevant information in accordance with the current accounting standards and systems. It aims to present the current corporate financial status, operating conditions and other indicators in the form of data, so as to help

companies seek advantages and avoid disadvantages and make correct plans and decisions. The Tax Law is based on the relevant theories of national political management to calculate the tax payable. It can also be used as a voucher tool for tax payable. The results under the calculation of the above accounting system and the Tax Law system are completely different. At this time, an algorithm specially used to study the theoretical relationship between accounting income and tax income was born, which is called income tax accounting [3].

The main reason for income tax accounting is the inconsistency between Tax Law and financial accounting in dealing with daily accounting issues. Income tax accounting is used to eliminate these contradictory relationships. According to the different application types and defined relationships, income tax accounting is divided into multiple versions, such as complete unified theory, mutual unified theory, and financial accounting branch theory. But its ultimate purpose is to solve accounting problems in taxation, and it has relative development independence.

## 2. RELATED THEORIES OF CORPORATE MERGERS AND ORGANIZATIONS

Corporate mergers and acquisitions include merger and acquisition. It is called merger and acquisition in the world. It mainly refers to the behavior of enterprises using economic means to obtain the property rights of other legal persons under the condition of equivalence. According to different methods for corporate mergers and acquisitions, it is generally divided into mergers between enterprises, business combination and acquisitions between enterprises. Combination refers to the effective reorganization of two or more companies according to the legal relationship. The company before the merger will no longer enjoy the rights and status of corporate legal person [4]. Merger is the effective combination of two or more companies into a new company. The legal person of the previous company enjoys certain rights and obligations of the new company. Based on the above contents, the combination and merger between enterprises mainly depends on whether a new company is generated and whether the previous legal person enjoys rights and obligations. Acquisition means that a company purchases the assets and stocks of another company

at the market price and has the right to control the company after mastering sufficient resources. Acquisition is divided into asset acquisition and share acquisition according to the two means of purchasing company assets or stocks. There is no significant difference between acquisition and merger according to the rights exercised by different corporate legal persons, and it is difficult to effectively distinguish them in practice, so they are often combined and used together, which is called corporate mergers and acquisitions.

### 3. THE TREATMENT OF INCOME TAX ACCOUNTING IN THE PROCESS OF ENTERPRISE MERGER AND REORGANIZATION

#### 3.1 Impact of different mergers and acquisitions methods on income tax treatment

Mergers and acquisitions methods can be divided into general mergers and acquisitions methods and special mergers and acquisitions methods. These two methods are clearly distinguished in Finance and Taxation No. 59 Document. For special mergers and acquisitions, it should be noted that the purpose of income tax accounting is not to make the enterprise's income or loss unrecognized, but to avoid unrecognized losses and income, which will be handled in subsequent taxable transactions. The existence of special treatment is conducive to the adequacy of enterprises according to equity. At this time, there is no need to invest cash or only a small amount of cash. If enterprises need to immediately confirm enterprise mergers and acquisitions, all enterprises participating in mergers and acquisitions need to raise additional funds. At this time, the whole enterprise mergers and acquisitions will be affected [5]. Based on the above, the sufficient tax exemption in special mergers and acquisitions is not a real tax exemption, but delays the tax to the corresponding stage. In this stage, because the transferor does not directly confirm the transfer, the substantive tax burden will be transferred to the transferee due to enterprise mergers and acquisitions. General mergers and acquisitions refers to all enterprise mergers and acquisitions activities except special mergers and acquisitions. Because it does not involve the acquisition of equity and does not take sustainable operation as the goal, it is a conventional market transaction. In the process of income tax treatment of general mergers and acquisitions, all enterprises participating in mergers and acquisitions need to follow relevant principles: (1) the consolidated assets and liabilities of the enterprises participating in mergers and acquisitions will be determined according to the fair value; (2) the merging enterprise has no right to deal with the losses faced by the merged enterprise before; (3) the merged enterprise needs to completely clean up all income tax matters before being merged.

#### 3.2 Treatment of income tax accounting in mergers

and acquisitions

For mergers and acquisitions under the same control, the enterprise will record it according to the original book value given by the purchased enterprise. However, the tax basis needs to be analyzed and determined according to the payment method and other relevant conditions in mergers and acquisitions. Since the enterprise completes the mergers and acquisitions under the same control, all resources are still managed by the original enterprise, but all book values are recorded and managed. Based on this, the total value of the enterprise has not changed, but has achieved unified management. Tax calculation mainly depends on the basic judgment results of mergers and acquisitions in the Tax Law. If the Tax Law defines it as general mergers and acquisitions, it is also an important content worthy of study. For the merger and acquisition of enterprises that is not under the same control, in addition to the change of tax basis, the enterprise is equivalent to directly purchasing assets from the outside. At this time, the total assets of the enterprise change, and the above two aspects need to be combined when confirming the fiscal and tax differences. When the acquirer enterprise carries out accounting treatment for the purchase activities, it needs to consider the funds invested in the purchase of the assets of the purchased enterprise and the relevant debts undertaken by the purchased enterprise, and comprehensively calculate the increment of the total value of the enterprise.

### 4. CONCLUSION

In summary, corporate mergers and reorganizations are the only way for their long-term development, and income tax accounting is a key link in corporate mergers and reorganizations. Doing a good job in this area and summarizing the income tax accounting treatment faced by corporate mergers and reorganizations under different conditions can clarify the solutions and avoid various risks, which is conducive to the smooth completion of mergers and reorganizations and helps to guarantee their sustainable and stable development.

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# Analysis of the Current Situation and Countermeasures of Online Teaching During the COVID-19 Outbreak

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**Abstract:** As an emerging network social media, network broadcast has gradually entered the public's vision, and network teaching has also emerged. Since 2016, "the first year of online live broadcasting", online teaching has shown a trend of vigorous development. The outbreak of COVID-19 has provided a very good opportunity for the development of online teaching, but it also faces great challenges. In the face of challenges, managers, teachers and relevant education enterprises have the responsibility to shoulder the mission and take positive measures to face together.

**Keywords:** network teaching; Status analysis; countermeasures

## 1 INTRODUCTION

At the end of 2019, THE COVID-19 epidemic invaded Hubei province and swept across China with fury. In order to slow down the spread of the virus and ensure the health and safety of teachers and students, the General Office of the Ministry of Education and the General Office of the Ministry of Industry and Information Technology jointly issued a Notice on the Arrangement of "School Suspension" during the delayed term of primary and secondary schools. In order to better respond to this measure and reduce the impact of school suspension on students at all levels across the country, online teaching has become an important measure to solve this problem.

Network teaching: that is, schools use computer network equipment and Internet technology to implement information education for students, and realize the real-time interactive distance teaching mode of point-to-multipoint Internet. [1] The common teaching means of network teaching include video broadcasting, Web teaching materials, video conference, multimedia courseware, BBS forum, chat room, E-mail and so on.

The vigorous development of network teaching has injected new vitality into traditional classroom. However, in the context of COVID-19, with the launch of live online classes, teachers and students have been exposed to see each other across the air, resulting in a "crisis" in the teacher-student relationship. The role of teachers is not clear, and the educational technology ability is insufficient. [2] Online teaching is not just about transferring offline

courses directly to online, but teachers, students, managers and related education enterprises are all faced with a series of extremely challenging difficulties and problems.

## 2 THE ADVANTAGES OF NETWORK TEACHING

### 2.1 Sharing educational resources

Network teaching maximizes the value of existing high quality educational resources by redistributing resources. On the one hand, the network education platform can spread advanced teaching ideas and concepts and share advanced education level and equipment. On the other hand, the combination of the Internet and education enables high-quality educational resources to be delivered to the underdeveloped areas of the country through the Internet platform, thus promoting the fairness of education. [4] Everyone can enjoy the same educational resources and improve resource utilization. At the same time, the network teaching mode can break through the limit of the number of students attending classes and change the traditional classroom teaching mode of one teacher and dozens of students. Teachers can independently control the number of classes and students attending classes to maximize the utilization of resources.

### 2.2 Breaking time and space constraints

The development and reform of network teaching to education is mainly reflected in three aspects: the learning mode becomes flexible, and the choice of time and place is wider; The teaching mode has changed from knowledge point to interactive teaching, and the communication mode between teachers and students has changed from single-line communication between teachers and students to network communication mode between teachers and students and network resources. The school has changed from a group of teachers teaching in a traditional fixed classroom to a large platform for teaching resources to impart knowledge on the cloud.

Compared with traditional teaching facilities and environment, students can participate in learning at home as long as there is Internet. Teachers can also flexibly choose teaching sites according to the content of teaching, so as to increase the interest and flexibility of class and achieve situational teaching.

### 2.3 Meeting individual needs

Compared with traditional classroom teaching, the biggest advantage of network teaching lies in the

reusable classroom resources, so that the resources of a class can be played back many times. According to Bloom's theory of mastery learning, almost all students can master 80 to 90 percent of what they learn, given enough time and proper instruction. Therefore, given the proper teaching environment and guidance, most students can learn something.

Diversified teaching presentation methods, such as live broadcasting, recording, micro classes, and abundant high-quality teaching resources on the Internet, provide personalized services for students; The interactive teaching link is flexible, teachers and students can choose to answer questions online, anytime and anywhere for students to solve problems; The teaching feedback is timely and personalized teaching can be well realized.

### 3.THE DISADVANTAGES OF NETWORK TEACHING

#### 3.1 difficulties for teachers to adapt to role change

In network teaching, teachers must first face the change of their own role. From the traditional knowledge "imitator" to the "collaborator" of students' learning, this has put forward high requirements for teachers' professional quality and educational technology ability. "Many teachers find it difficult to fit into students' 'cultural field' when teaching online. The so-called 'cultural field' refers to an independent psychological state formed by students in the process of learning online courses, including students' ideological dynamics and emotional experience." [2] How to achieve a large amount of offline interaction and free discussion among students in online live classes is a very difficult problem.

#### 3.2 Students' independent learning ability being insufficient

Network teaching puts forward higher requirements for students' autonomous learning ability. Students have changed from a "ritual" classroom to a relaxed home environment, which requires students to have a higher degree of independence and autonomy. In offline learning, students there is evident in the competing relationship between, easy to form good learning atmosphere, but in learning to live, often to voice clarity and consistency of the picture, the teacher usually shut off camera, students can form a person in the study of impression, reduce the engagement of students in the classroom, It is not conducive to stimulating students' learning enthusiasm. In addition, in the face of the network teaching, students are easy to be distracted and their thoughts wander away, and the check-in and punching in each class is also a burden for teaching. Interactive q&a, group cooperative learning and other common teaching methods will be relatively difficult to carry out in network teaching, which will affect the learning effect of relevant courses. The network condition of students' home, the performance of hardware devices such as mobile phones and

computers, and whether the environment is quiet also test students' concentration and self-control. Long-term use of electronic devices for students to study may also be a potential threat to physical injury.

#### 3.3 Lack of management experience, difficult to guarantee teaching

As the school management, how to provide effective online technical support for teachers, and how to provide rich and high-quality teaching resources? How to evaluate the quality of teachers' teaching work? These are issues that need to be resolved as soon as possible. Although online courses can also realize interaction, due to the delay of interaction, teachers and students cannot have real-time dialogue, and teachers can only receive students' text or voice information, so they cannot directly supervise and manage students' learning. The non-intuitive nature of online classroom teaching makes it impossible for teachers to analyze and deal with students' overall mastery, and there is no set of perfect methods to ensure students' attendance and class discipline, which increases the difficulty of classroom management. A smooth network is needed to ensure the live class, which will affect the teaching effect due to delays and ambiguity. How the management solves the problems of network technology is also a big problem.

### 4 MEASURES TO BE TAKEN IN THE FACE OF CHALLENGES

Despite the huge challenges posed by COVID-19, the government, the Ministry of Education, relevant education enterprises, schools, teachers and students are all working hard to shoulder their responsibilities.

#### 4.1 Strengthening teacher training and enhance educational technology capabilities

Teachers can make full use of rich network resources and Internet technology to improve their information technology ability. Before starting online teaching, I should carry out psychological construction and training related to educational technology ability to help myself get familiar with the use of live teaching software and platform as soon as possible. Give full play to the advantages of online teaching, strengthen the deep integration of information technology with education and teaching, promote the reform of learning methods, promote the innovation of teaching models, improve the effectiveness of classroom teaching, and ensure the quality and quantity of teaching tasks. As teachers, they should also learn some popular communication terms among students, fully integrate into the "cultural field" between students, make their teaching language more interesting, and make the classroom atmosphere more relaxed and pleasant, so as to improve students' learning enthusiasm. [5]

#### 4.2 Improving the effectiveness of school management and enrich educational resources

As the school management, they should timely understand the situation and teaching needs of the

school, adjust the course teaching plan appropriately, combine the characteristics and technical advantages of the online teaching platform course resources, play the leading role of "National High-quality online Open Course" demonstration, and provide teachers with rich teaching resources and platforms. At the same time, the school network teaching technology guidance group is established to provide teaching platform and software support services for teachers, to help teachers and students adapt to the new teaching environment, master online teaching skills, deal with the network technology problems encountered in the process of network teaching, and improve the effect of online teaching.

#### 4.3 Improving the hardware resources of relevant enterprises and optimize the network broadcast environment

The stability of the network teaching platform is the necessary guarantee of network teaching success as a network teaching platform of the related enterprises, facing a number of online users, users use difficulties, such as the time is relatively concentrated, the stability of the online platform for students to use should be first guaranteed, prevent because use too much, platform overload and collapse occurs, To ensure the normal use of the teaching platform. Enterprises have the responsibility to speed up the research and development of a group of distinctive and representative online learning platforms, improve

the functions of existing online learning platforms, and ensure the normal operation of the network. All enterprises should strengthen coordination with industry and information technology departments and network operation enterprises, actively strive for relevant support, based on the actual situation, according to the local network situation, service capacity, student distribution, etc., do a good job of analysis and judgment, targeted guidance for "off-peak" login online.

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# On the Construction of Interactive Teaching Mode under the Network Environment

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**Abstract.** This paper on how to build the topic of the interactive teaching mode under the network environment, the meaning of network interactive teaching mode, network interactive teaching mode should follow the rules in this, and in combination with the modern teaching method on how to build perfect interactive teaching mode under the network environment put forward relevant Suggestions, for reference.

**Keywords:** network environment; interactive teaching mode; network teaching platform

## 1 THE SIGNIFICANCE OF CONSTRUCTING INTERACTIVE TEACHING MODE IN NETWORK ENVIRONMENT

### 1.1 The concept of interactive teaching mode in network environment

The interactive teaching mode under the network environment is different from the traditional teaching mode. It is a new teaching mode derived from the rapid development of the Internet, which makes full use of the advantages of multimedia network resources and supplements the limitations of traditional teaching. Interactive teaching mode in multi-media network environment of the role is mainly: the teacher plays a guiding role, leading from the traditional teaching, the students become the model of "leading role", namely the main body, the students in this mode by students and students, students and teachers and students to interact with the computer three carry out autonomous learning, targeted to get knowledge[1].The biggest characteristic of network interactive teaching lies in highlighting the main role of learners and the assisting role of teachers through the network platform.

### 1.2 The positive role of interactive teaching mode in the network environment

The interactive teaching mode under the good network environment can give full play to the advantages of network teaching, optimize the teaching course through advanced teaching means, strengthen the teaching effect, not only achieve the teaching objectives, but also promote the comprehensive development of students' ability. It mainly reflects the following positive effects:

#### 1.2.1 Promoting students to form good collaborative learning habits

Collaborative learning refers to that students discuss, debate or consult on online platforms such as forums

and QQ groups after class or during self-study according to a knowledge point, question or question they have discovered. In this way, students constantly improve their knowledge system and strengthen their cognition of course knowledge. Teachers can timely understand students' learning dynamics and provide assistance to consolidate teaching effects and improve teaching quality.

#### 1.2.2 stimulating students' interest in autonomous learning

Compared with the traditional teaching platform, the interactive teaching platform in the network environment can be flexible and intelligent. Through operation, it can show rich and colorful pictures, audio and video, provide interactive man-machine interface, and lock any information needed by the other party in the large-scale learning information base according to the needs of learners. This way of learning is not only convenient for students, but also stimulates students' strong interest in independent learning and gives them a strong motivation to explore new knowledge and innovate learning thinking.

#### 1.2.3 promoting a good learning atmosphere and reflect the good atmosphere of democracy and harmony

In the interactive teaching mode, students can play a prominent role and even act as the initiator and organizer of learning, while teachers play the role of facilitator in this process, giving guidance, guidance and service to students when necessary[2].

## 2 RULES OF INTERACTIVE TEACHING MODE UNDER NETWORK ENVIRONMENT

There are many rules that should be followed to construct interactive teaching mode in network environment, but the most important thing is to "take the student as this," according to the theory teaching, creating interactive teaching model suited to the characteristics of the students' age, finally reach the ultimate goal of improving students' comprehensive quality.

### 2.1 Networking Rules

Following the network rules, mainly refers to the establishment of interactive teaching mode can not be separated from the network environment, the network function and interactive teaching closely combined to train students' independent learning ability, the spirit of scientific research. Through online question bank, online experiment, online test and other network learning platform, with the help of information

release, file download, multimedia technology and other network means, to achieve learning objectives.

### 2.2 Cooperation Rules

Following the cooperative rules, it points out the importance of the cooperative nature of network interactive teaching, and also points out that students' learning ability can be continuously improved by complementing each other's advantages through cooperation. Cooperation runs through the whole interactive learning process. It can be one-to-one, one-to-many, or many-to-many cooperation, using various forms such as discussion, comment.

### 2.3 Autonomy rules

Following the autonomy rule can provide students with a variety of learning choices, create free space for students to create, improve students' learning enthusiasm. Students can choose their own learning mode, learning materials and test forms through the network interactive platform, so that students can spontaneously seek help and acquire new knowledge as masters.

## 3 WAYS TO BUILD THE PERFECT INTERACTIVE TEACHING MODE UNDER THE NETWORK ENVIRONMENT

in the process of constructing network teaching interaction designers to the teaching goal, teaching task is blended in among them, and give play to the role of teacher's help, fully reflect the cognitive subject role of students, arouse the enthusiasm of initiative, and realize the teaching mode compared with the traditional model of complementary, inclusive.

### 3.1 The construction of network teaching interactive platform

The network teaching interactive platform should be built to create a perfect network learning environment for students as the goal, according to the needs of students interactive learning to build[3]. We should make full use of the resources advantage of campus network construction and build a network teaching platform suitable for students' learning characteristics. The content of the teaching platform can be divided into three parts: courseware platform, case platform and discussion platform. First of all, the courseware platform can cover excellent courseware made by teachers, available textbooks, different teaching modes, personalized homework, different types of tests and so on. Secondly, the content of the case platform can cover the case modules made by students and the actual teaching case modules of teachers. The simulation cases made by students are mainly from the excellent schemes collected each year, while the teacher cases are mainly selected from all the teaching cases. Discussion platform can include BBS platform, Q group platform, email and other channels.

### 3.2 Design of interactive mode of network teaching

Network teaching interactive mode mainly includes several kinds of students. Machine interaction, health.

Living interaction, living. Division interaction and other three, which are inseparable from the basic environment of the network:

#### 3.2.1. Machine interaction mode

Students participate in the network interaction environment with courseware as the main form, students can experience the interesting content in the "class" in the network courseware, stimulate their interest, and can leave messages on the message board, which is conducive to the backstage operators to sort out and improve the feedback of the courseware later[4]. On the other hand, students can also choose network learning resources according to their own grasp of the situation, and participate in the interesting "knowledge" type test, through the way to consolidate knowledge, and get spiritual encouragement, improve the attraction of interactive.

#### 3.3.2 Exchange for a lifetime or a teacher

In the process of the interactive model, the role of the teacher ACTS as the assist, when necessary to guide and help, this model mainly includes: (1) the students to upload their own exercises demonstration operation, to share their successful experience, to solve the problem like "little teacher" transfer personal experience, and support other students to discuss and to participate in, the teacher's comments, etc[5]. (2) Through campus BBS, campus chat rooms, QQ groups and other online communication network tools, break the limitation of time and space, and provide a network platform for students and students, students and teachers. For example, whenever students have ideas, they can share their new findings, new problems, new ideas and new solutions to each learning member who knows them or does not know them through the network, which is conducive to the online students to make suggestions, pool their wisdom, sublimate knowledge points and improve learning quality. And teachers can not only intervene and guide, but also observe behind, timely summarize students' learning situation, feedback and refine rules, which is conducive to the improvement of teaching methods in the future.

## 4.CONCLUSION

With the development of high-tech environment, network has gradually become the second environment for students to learn. It breaks the restrictions of time and space, provides a good platform for teaching interaction anytime and anywhere, and has become a learning mode favored by students. In this regard, we should attach great importance to this network interaction mode, make full use of network resources in school, constantly summarize, dare to innovate, and improve the comprehensive quality of students.

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# An Analysis of the Input Hypothesis in Language Teaching Practice

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**Abstract:** The Input Hypothesis put forward by Krashen, is one of the most influential and ambitious second language acquisition theories in recent years, within which Krashen tries to explain how people acquire language. This essay will analyze the Input Hypothesis from several aspects and discuss its applications in language teaching practice.

**Keywords:** Input Hypothesis; Krashen; Second Language Acquisition (SLA)

## 1. INTRODUCTION

According to the Input Hypothesis, the way people making progress in language learning can be defined as “i+1”, in which “i” is one’s current level in the language studying, while “1” represents the language knowledge are “slightly beyond” the learner’s current competence level and the learner might understand or infer the meanings with the help of other knowledges[1]. In that case, the learner will focus on the meaning of the content, rather than the language form. Krashen proposes an important concept “comprehensible input” here, which appears to be the core concept in the hypothesis[2]. He claims that the “comprehensible input” needs to be sufficient and relevant, which can facilitate the learner to acquire knowledge unconsciously[3].

This hypothesis also presents Krashen’s position towards the output. According to Krashen, production ability emerges naturally overtime[4]. It is the consequence of the acquisition, and it cannot contribute to increasing enough comprehensible input directly[5].

## 2. EVIDENCE

### Modified Speech

There are four different kinds of modified speech: caretaker speech, teacher-talk, foreigner-talk, and interlanguage-talk. Krashen chooses the first one as the most powerful evidence of the Input Hypothesis.

The caretaker speech is characterized by a slower rate of delivery, shorter, simpler sentence patterns, stress on keywords, repetition and emphasize the listener’s immediate environment[6]. Although the caretaker speech is not a deliberate way to teach children language, this speech unconsciously provides a great amount of comprehensible input to children which assists them to develop their language ability.

When it comes to second language acquisition, the language version used in classes (teacher-talk), the adjustments made by native speakers when talking

with non-native speakers (foreigner-talk), and the version produced by other learners speak (interlanguage-talk) are also simple codes, which aim to provide enough comprehensible for second language acquirer to understand language[5]. These kinds of speech take advantage of the second language acquirer’s previous knowledge, using modified and simplified language to help the acquirer to understand what is being said and to acquire language knowledge during this process.

### Silent Period

Krashen also notices that when people first enter a different language environment, there is a period of silence[1]. During this period, people are trying to build their second language competence via listening and understanding the language around them. This is an accumulation and natural process, which means they do not have to produce output, instead, when they accumulate enough comprehensible input and master enough second language competence, they can produce output spontaneously[1]. Krashen uses the “silent period” to argue that output is less important than input and speaking is the consequence, not the cause of acquisition[1].

## 3. EFFECTIVENESS AND LIMITATIONS

### Effectiveness

The positive side of the Input Hypothesis seems obvious in the real-world teaching application: easy to understand and consistent with most educators’ experiences[7]. By emphasizing the importance of comprehensible input, this theory changes the focus of second language teaching: from form-based to meaning-based, which have detailed guidelines to teachers on how to create more comprehensible input in classroom settings[8].

Another significant advantage of Krashen’s Input Hypothesis is that it answers some long-lasting questions existing in the SLA area, such as how do people acquire language? what is the role of the input? what is the function of teachers? This hypothesis has contributed to the research development in the field of SLA, serving as a “catalyst”, inspiring a lot of linguists and researchers to do further investigations in this area[9].

### Limitations

Inevitably, for such an influential theory, ever since it appeared, it has received seriously criticized on various grounds from different researchers and linguists.

First, most critiques focus on Krashen's vague expressions of certain terms in the Input Hypothesis. For example, when we talk about "i+1", Krashen said it is "slightly beyond" the current level[5]. The question is how we can define "slightly"[10]. Also, Krashen fails to be precise when he explains "comprehensible input". He says, "input is comprehensible when it is meaningful to and understood by the hearer"[5]. However, according to McLaughlin, this expression is a tautology[11]. All these implicit makes it unmeasurable, which seems impossible for researchers to design experiments to testify the correctness of the theory.

Besides, Krashen devalues the importance of output and interaction. Although he admits that speaking can assist the learner's interlocutors to modified speech making it more understandable, he denies the direct effect of output and put too much attention one the input[12]. Swain, who proposed the "output hypothesis" disrupted that when it comes to improve the learner's proficiency in higher level of SLA, it is vital to push output and give proper feedback, which may allow the learner to realize the gap between what he/she can express between what he/she wants to express and pay more attention to produce accurate language[13]. Also Long holds the idea that making interaction of speech during the interaction of others will help interlocutors gain more comprehensible input[14].

#### 4. IMPLICATION

##### Krashen's four-stage model

Based on his theory, Krashen concludes a four-stages model for language teaching. The first stage is general language teaching. By given basic comprehensible input, novices may establish preliminary understanding. Followed by an immersion-style comprehensible subject-matter teaching (termed 'sheltered' classes), which in Krashen's view can solve the problem of how learners apply what they have acquired in the actual communication with native speakers[1]. In this kind of classroom, teachers will use the target language (TL) to teach students comprehensible subject-matter material. By focusing on the meaning instead of form, students are exposed to a great deal of comprehensible input, thus the ability to produce will be a result of this input[1]. The third and fourth are interrelated. After the second stage, Krashen suggests educators help students first exposed to the areas they have the best chance of understanding, then gradually expand to other areas until the full range is presented to students[1].

##### Classroom Application

Based on the Input Hypothesis, there are several ways for teachers to improve current teaching approaches.

First, it is vital for teachers to offer more comprehensible input in class. For those who lack exposure to the TL, the class is the primary way for

them to gain input. So, teachers need to choose materials and topics very carefully and take natural communitive input into consideration, to ensure that each student will be exposed to some comprehensible input suit his/ her current competence[15]. This is suggested by Krashen as a "casting a net", with ample amounts of input, learners are likely to receive "i + 1" geared to their acquisition needs[16].

Also, the arrangement and sequence of the class should not be ignored. The arrangement of the class should follow the natural order. Therefore, the introduction of input should first focus on the area that easy for students to understand, then expand wider. Teachers can modify the language they use in the class, as well as using some auxiliary tools, such as pictures and videos, to make their speech easier to understand. Besides, at the beginning, students should be allowed to have a silent period, which allows them to accumulate enough input and keep silent. With the increasing exposure to the TL, they will gradually master the competence to make output, and during this process, mistake-correction should be avoided.

Free Voluntary Reading and Sustained Silent Reading Not only concentrating on the classroom application, but Krashen also encourages students to do more Free Voluntary Reading (FVR) in their free time. Reading what you like when you want to in the TL will ameliorate students' ability in reading and writing[17]. Later, Krashen develops this concept into the school setting and figures out that teachers can design a special Sustained Silent Reading (SSR) for students in school every day, giving students' access to read whatever they like without the pressure of book reports or test[17]. In this way, acquirers can obtain comprehensible input in a relaxed environment which, according to Krashen, is necessary and beneficial for the acquisition of the second language[17].

#### 5. CONCLUSION

Krashen's theory is one of the most important SLA theories in recent years, since it is systematic and comprehensive, encompassing almost every aspect of second language acquisition[18]. Although it still contains controversies that need linguists and researchers to do further improvement, the limitations of this theory act as a trigger to promote the development of the research in the second language acquisition field.

Based on Krashen's theory, it is crucial for language teachers to pay special attention to give students enough comprehensible input in a comfortable environment. Applying the new pedagogies will help teachers create effective classes and facilitate learners to acquire foreign languages. Meanwhile, when considering the limitations of the Input Hypothesis, it is inadvisable for teachers to overlook the impact of interaction and output during the second language acquisition. It is always the teacher's responsibility to be proactive, combining the theory and the actual

teaching situation to create better consequences.

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# Research on Translation of Costume in Jin Ping Mei under the Cultural Context

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**Abstract:** Jin Ping Mei is a classic work of Chinese costume culture. The words describing costume in Jin Ping Mei reflect the traditional Chinese culture of aesthetics, customs, systems and etiquettes of the Ming Dynasty. From the perspective of cultural context, taking the two English versions of Jin Ping Mei translated by Clement Egerton and David Tod Roy as the object, this paper makes a comparative study of the translation of culture-loaded words related to costume in Jin Ping Mei. Finally, it's concluded that when it refers to cultural translation and research on costume, the translator should fully consider the influence of cultural context, and moderately take some translation methods and strategies like literal translation, free translation, interpretation, domestication and foreignization. In this way, the unique Chinese culture applied behind the costume will be properly presented to the target readers, making them have a deep understanding of the rich connotations of Chinese costume culture.

**Key words:** Cultural context; Jin Ping Mei; Costume culture; Translation

## 1. INTRODUCTION

With a long history of development, ancient China has won the reputation of a "great nation of costume". The costume of each period not only inherited the traditions of the previous generation but also had the characteristics of their times. In the Ming Dynasty, with the development and prosperity of the commodity economy, the costume culture underwent remarkable changes. Jin Ping Mei, known as the first wonderful book of the Ming Dynasty, vividly reflected that kind of change. The descriptions of a lot of beautiful and various costumes in this book either depict the images of characters, reveal their status, or show the customs of that time. It is a great challenge that how to translate the colors, styles and cultures implied behind the costume. Also, it is an important issue related to whether the social customs, etiquette system, characters and themes reflected in this book can be accurately conveyed to the target readers. Two English visions of Jin Ping Mei translated by Clement Egerton and David Tod Roy provide us valuable research materials. From the perspective of cultural context, this paper, taking the translation of culture-loaded words related to costume in this book as examples, makes a comparative analysis of the two versions and summarizes the

strategies for the translation of costume culture under cultural context, which aims to promote the dissemination and development of costume culture of Jin Ping Mei.

## 2. EXPLANATION OF CULTURAL CONTEXT

The study of context originated in the 1860s and 1870s, which is mainly about how to understand and use language in a specific situation. Context is divided into three types: linguistic context, situational context and cultural context. Among them, linguistic context refers to the internal environment of the text; Situational context refers to the surrounding situation, the nature of the event, the relationship between the participants, the time, the place and the way when the text is produced; Cultural context refers to the history, culture and customs of different nationalities. The concept of cultural context was first put forward by Malinowski, a British anthropologist, which mainly researches the use and function of language and the specific social norms and customs of a speech community. As Huang Guowen said, "Every speech society has its own history, culture, customs, social norms, mode of thinking, moral concepts and value orientation. The ways and factors that reflect the characteristics of a particular speech community constitute 'cultural context'".

According to Halliday, there are mainly five factors that the cultural context influences the translator's judgment, including thinking mode, social and cultural background, values, social psychology, geographical and historical traditions. Therefore, when translating under the guidance of context theory, we should focus on the above five aspects to consider the understanding and the reproduction of meaning. During translation, first of all, the original sentence should be analyzed in the context and try to use literal translation. If the literal meaning in the context is found difficult to be understood, then the translator should analyze its cultural context to determine its exact pragmatic meaning, and try to find a translation that can transfer the same literal meaning of the text. Through the cultural translation strategies and the complement of the source text, the translator will properly coordinate cultural differences between the target language and the source language, making the target readers better understand the culture in the source text.

## 3. CASE ANALYSIS OF JIN PING MEI UNDER THE CULTURAL CONTEXT

Clothing is one of the basic necessities of life, which means it plays an important role in human life. Costume, as a cultural symbol, reflects the track of historical development and cultural ideology of a country, and even shows the profound cultural connotation of a nation. China is a great country of costume. So, Chinese costume is very particular about the type, style, material, color, fabric and so on. The culture contained in Chinese costume is rich and colorful, which undoubtedly brings great challenges to the cultural translation of costume. Taking the two English versions of *Jin Ping Mei* as the object, this paper makes a comparative analysis of the translation of two kinds of culture-loaded words, namely color and etiquette system, and summarizes the strategies of cultural translation of costume.

3.1 Translation of Culture-loaded Words about Color  
Chinese culture of color is an important part of Chinese traditional culture. Chinese traditional color is the reflection of the politics, economy, social life, customs, ideological concepts as well as aesthetic style of different historical periods. Chinese color is very rich and various, which has a wide range of applications in people's life. The Chinese people integrate various ideas about the natural universe, ethics, philosophy, etc. into color, forming a unique Chinese color culture. Therefore, it is necessary to carefully analyze the Chinese culture behind the color of costume in the translation of classics involving costume, so as to correctly convey the original information to the target readers. The author selects several typical examples from *Jin Ping Mei*. For the convenience of readers, the following translations of Egerton's version are referred to as ET, and those of David Tod Roy are referred to as RT.

Example 1: 吴月娘穿着大红妆花通袖袄... (第十五回)

ET: The Moon Lady was dressed in a red-quilted cloak...

RT: Wu Yueh-niang was wearing a full-sleeved jacket of figured scarlet material.

Example 2: 红纱膝裤扣莺花, 行坐处风吹裙袴。(第二回)

ET: Her scarlet silken trousers were decorated with birds and flowers and, as she sat or when she rose, the wind would puff out her skirts and flowing undergarments.

RT: Her red silk ankle leggings are figured with orioles among the flowers; Whether walking or sitting, the breeze parts her skirts and reveals what lies below.

Look at the two translations of “红”. Both of them adopted literal translation. “大红” was translated into “red-quilted” by Egerton, while it was translated into “scarlet” by David Tod Roy. However, “大红” in China symbolizes happiness, success, nobility, loyalty, prosperity, auspicious and other good connotations, while in the West, it often symbolizes blood, violence,

cruelty, fanaticism, and other bad connotations. Scarlet is a deep color of red, which sometimes means sexy and lubricious in English. The author of the source text described the clothes of Wu Yueniang as “大红”, aiming to convey her noble and solemn status as “the first wife”. Given that, the literal translation is hard for the target readers to understand the original information. Therefore, the seemingly faithful translation may cause a lack of cultural significance.

Example 3: 西门庆头戴缠综大帽, 一撒钩绦, 粉底皂靴, 进门见婆子拜四拜。(第七回)

ET: He was wearing a large hat of woven palm and a pair of white-soled boots, ...

RT: Hsi-men Ch'ing was wearing a large palmetto hat, a long gown fastened at the waist with a sash, and white-soled black boots, ...

In this example, Egerton translated “粉底皂靴” into “white-soled boots”, which omits the translation of “皂”. While, David Tod Roy translated it into “white-soled black boots”, which fully expresses the color and style of the boots. “粉底” does not mean the sole is pink. According to relevant historical materials, it refers to brushing the sole with white powder, so that the white sole and the black upper form a distinct contrast. When translating, Egerton and David Tod Roy both chose the domesticating translation and translated “粉底” as “white-soled” instead of “the sole painted with white powder”, which is not only concise but also conveys the meaning of the color and style of the boots. In order to further highlight the effect of Hsi-men Ch'ing's arrogation of dress and etiquette, it can be marked in the place where the boots first appeared: “Only court officials and people from upper class are allowed to wear the white-soled black boots, While normal folks don't have this right.” From the perspective of cultural context, both versions adopt the domesticating translation strategy, taking into account the real shape and style of the costume instead of sticking to the surface meaning of words. They achieved cultural equivalence, so both versions are desirable.

3.2 Translation of Culture-loaded Words about Etiquette System

China is known as “a nation of etiquette”. Chinese culture of etiquette system is a set of the organized normative system actively created by people in order to meet the needs of human survival and social development, which has a history of thousands of years. In *Jin Ping Mei*, there are a lot of culture of ancient etiquette systems hidden behind the costume. In order to make the target readers fully understand Chinese culture of etiquette system through the cultural translation of costume, from the perspective of cultural context, the translator should take into consideration the social background and historical knowledge in that period, and adopt appropriate

translation strategies to convey cultural information. For example:

Example 4: 西门庆戴忠靖冠，丝绒鹤氅，白绫袄子。（第四十六回）

ET: Hsi-men Ch'ing was wearing a chung ching hat.

RT: Hsi-men Ch'ing was wearing a "loyal and tranquil hat", a velvet robe decorated with a crane motif, and a white satin jacket.

"忠靖冠" is one of the official hats made during the reign of Jiajing in the Ming Dynasty. Without the historical knowledge of the system and culture at that time, readers will certainly not know the real meaning the author expresses in the source text. The word "忠" in the Chinese dictionary means a characteristic of sincerity and selflessness; The word "靖" in the Chinese dictionary means quiet and peace, making the world stable. Therefore, "忠靖冠" has a profound meaning and embodies the long-cherished political wish of the rulers at that time. The translations of this kind of hat by two translators are very different because there is no such hat in foreign countries and lack of equivalent words of "忠靖冠" in English.

It can be seen from the above examples that Ergeton adopted the foreignizing translation strategy and transliterated it as "chung ching hat". Although foreign readers can know that this is a particular hat of ancient China, it is a pity that they cannot know the style and the cultural significance of the hat. David Tod Roy adopted the method of explanation and translated it into "loyal and tranquil cap". In addition, at the end of the paragraph, David Tod Roy annotated on the form and material of the "loyal and tranquil cap", explained the people to whom and the place where it should be worn, and pointed out that Hsi-men Ch'ing's wearing the "loyal and tranquil cap" was an act of across-system. In Oxford Advanced Learner's Dictionaries, the Chinese meaning of "loyal" is "忠诚的, 忠实的"(P1206); and the meaning of "tranquil" is "安静的, 平静的, 安宁的" (P214). It can be clearly seen that David Tod Roy's translation accurately expressed the cultural meaning of "忠靖冠". It almost achieved cultural equality for English and Chinese readers of different cultural backgrounds, demonstrating the translator's in-depth study of Chinese culture.

Example 5: 西门庆送至二门首，说道：“你休怪我不送你，我戴着小帽，不好出去得。”（第三十五回）

ET: I have not my ceremonial hat and, in the circumstances, it would not be becoming that I should see you off.

RT: You'll have to excuse me if I don't see you off any further. I'm wearing an informal skullcap in which it wouldn't do for me to be seen in public.

In this example, if "小帽" is translated literally into "small hat", it would confuse the target readers.

Therefore, the translator needs to understand the shape and style of it and the cultural meaning it represents with practice and historical information at that time. The whole part of "小帽" is evenly cut into six small petals and then stitched together one by one into a half globe. Thus, it was named after "universal unification". Universe refers to the sky, the earth and the four directions. The special name means that the whole world is under the control of the emperor, which has the deep cultural connotation of stability, harmony and unity of the society. Moreover, it was not only a style of hat in the Ming Dynasty, it was often used to refer to the common class, the people of the higher class would not wear that kind of hat. So there is not an equivalent word to replace it in English.

David Tod Roy translated "小帽" into "informal skullcap", which in Oxford Advanced Learner's Dictionaries means a skullcap (worn by many Jewish men or Catholic bishops)(P1883). So the Chinese meaning of "informal skullcap" is "非正式便帽". David Tod Roy's translation will probably misunderstand the target readers the culture of the source language. In contrast, Ergeton's translation--I don't wear a formal cap, adopts free translation, which is more suitable. However, it is a pity that the readers cannot understand the special shape and the institutional and cultural information contained in it. Therefore, the author believes that translators should appropriately use the strategy of explanation for such obscure words of the costume so that the target readers can not only understand the real shape and style of Chinese costume but also learn traditional Chinese culture.

#### 4. CONCLUSION

This paper takes two English versions of Jin Ping Mei as the research object. Through the comparative analysis of translation under the cultural context of Example 1 to Example 5 above, the author draws the following conclusions: when it refers to cultural translation and research on costume, the translator should fully consider five factors that the cultural context influences the translator's judgment, including thinking mode, social and cultural background, values, social psychology, geographical and historical traditions, and moderately take some translation methods and strategies like literal translation, free translation, interpretation, domesticating and foreignizing translation. It is helpful for western readers to judge the costume of characters from the perspective of Chinese culture and deeply understand the rich connotations of Chinese costume culture.

Classical works are loaded with a lot of Chinese cultures. In the process of costume translation under cultural context, on the one hand, we should pay attention to cultural differences as well as the feelings of target readers. It is necessary to combine the cultural context in a timely, moderate and appropriate

manner during cultural translation, and carry out cultural coordination constantly. We should neither add unnecessary and lengthy explanations excessively according to our own understanding nor ignore the interpretation of the cultural connotation of the source text by taking it for granted that the readers understand the culture of the source language. We should not only preserve, spread and carry forward the great cultural heritage of our own nation, but also absorb the fine cultures of different countries to enrich and develop our own traditional culture.

#### ACKNOWLEDGEMENT

This paper was sponsored by the research project of humanities and social science in education department of Hubei, (Research on Construction of Chinese-English Parallel Corpus of Peking Opera Costumes, Project No.20Y073) .

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# Application Analysis of Biological Genetic Engineering in Medicine

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**Abstract:** On the basis of the rapid development of modern technology, China's biological genetic engineering has developed rapidly and has been widely used in the field of medicine. Based on the meaning of biological genetic engineering, the development status of biological genetic engineering in China and its development in the field of medicine, this paper analyzes the application of biological genetic engineering in the field of medicine, such as insulin, interferon, antibiotics and pharmaceutical recombinant protein.

**Keywords:** biological genetic engineering; medical field; insulin; interferon

## 1. INTRODUCTION

In recent years, with the development of China's economy, China's scientific, technological and cultural level is also in a state of continuous development, especially in the research of biological genetic engineering. [1] It is precisely because of these achievements of biological genetic engineering that China's medical and health level has been greatly improved, effectively ensuring people's life and physical and mental development. Biological genetic engineering is to study from the gene level and solve the disease from the gene level. Biological genetic engineering makes full use of the current advanced biotechnology and combines with the current various advanced medical instruments, which brings more guarantee and convenience to people's life.

## 2. THE MEANING OF BIOLOGICAL GENETIC ENGINEERING

Biological genetic engineering is one of the key technologies developed in China. It can synthesize DNA molecules in vitro on an artificial basis, that is, recombine DNA. The recombined DNA can obtain new replication ability, and then import such DNA into the human body through relevant technologies and tools to finally achieve the expected goal. [2] The development of biological genetic engineering in China has lasted for decades and has been widely used in many fields. For the pharmaceutical field, the application of biological genetic engineering in the pharmaceutical field is late, but the achievements are remarkable, compared with other fields. Biological genetic engineering has the advantages of strong pertinence and solving problems from the source in the field of medicine, so it can fundamentally solve

the pain of human body. With the development and progress of biological genetic engineering, many previously impossible goals or unsolvable problems have been realized or solved. For example, some major diseases can be treated by biological genetic engineering. Therefore, it is very necessary to apply biological genetic engineering in the field of medicine.

## 3. DEVELOPMENT STATUS OF BIOLOGICAL GENETIC ENGINEERING IN CHINA AND ITS DEVELOPMENT IN THE FIELD OF MEDICINE

At present, China's biological genetic engineering has been applied in the field of plants, bacteria and animals, and has achieved good results in these fields. For example, in the field of bacteria, engineering bacteria are obtained through biological genetic engineering, and such engineering bacteria can extract insulin. [3] Therefore, good results have been achieved in the treatment of diabetes. For another example, in the field of plants, the structure of plants can be transformed through biological genetic engineering, so as to improve the disease resistance of plants. For another example, in the animal field, animals can show new characteristics through biological genetic engineering. In the field of medicine, due to the advantages of biological genetic engineering itself, it has achieved good development in the field of medicine. In fact, as early as last century, bio genetic engineering has been applied in the field of medicine, such as the treatment of diabetic patients, the treatment of acromegaly patients and other. [4] At present, the application of biological genetic engineering in the field of medicine has shown a better effect and played a more powerful role.

## 4. SPECIFIC APPLICATIONS OF BIOLOGICAL GENETIC ENGINEERING IN MEDICINE

### 4.1 Insulin

Insulin is a polypeptide protein hormone, which can promote the synthesis of muscle glycogen and other substances in the human body, and can also oxidize and decompose nutrients in the human body, so as to inhibit the conversion of other substances into sugars, prevent excessive sugar in the human body and maintain the balance of the human body. In diabetic patients, there are two main types; one is type I diabetes, and the other is type II diabetes mellitus. [5] Among them, the first is because insulin secretion in

the human body is relatively low, leading to diabetes. The second is human insulin resistance. With the vigorous development of biological genetic engineering technology in China, gene recombinant insulin has been developed. Such insulin can be manufactured in large quantities, which not only brings more convenience to the treatment of diabetic patients, but also reduces the burden of patients.

#### 4.2 Interferon

At present, people are very familiar with synthetic interferon. From the essential point of view, interferon is a kind of protein. If its content is moderate in the human body, it can promote the improvement of human immune ability and the synthesis of polysaccharide protein. Interferon can inhibit the growth of some viral substances because of its strong activity. At present, interferon has been widely used in the treatment of various tumor diseases. Through biological genetic engineering, interferon can be mass produced, which reduces the synthesis cost of interferon itself and promotes the application of interferon in more aspects.

#### 4.3 Antibiotics

Antibiotics are widely used in the field of medicine. For example, in clinic, many drugs need to be combined with antibiotics to obtain the best therapeutic effect. With the development of society, more and more new diseases appear, prompting people to have a deeper understanding of the importance of antibiotics. [6] At present, people's research on antibiotics is stronger. In the traditional antibiotic synthesis, it mainly depends on biological fermentation, but the overall speed of this synthesis method is slow and there are safety risks. However, biological genetic engineering can promote the synthesis of antibiotics to achieve larger scale synthesis and higher yield. At the same time, biological genetic engineering can also reduce the cost of antibiotic synthesis.

#### 4.4 Medicinal recombinant protein

Medicinal recombinant protein is one of the important products of biological genetic engineering. Compared with animal cells, plant cells have the advantage of totipotency, that is, they can grow in a suitable environment and grow into a complete plant. Therefore, plant genetic engineering has brought great help to the field of medicine. For example, the demand for serum protein has become higher and higher in recent years. According to relevant statistics, the world's demand for serum protein will exceed 5 million tons in 2020. For a long time, serum proteins are mainly obtained by extracting human blood. Such serum proteins are not only expensive, but also have certain safety risks, such as being infected by microorganisms. [7] However, through biological genetic engineering, the medicinal recombinant protein is produced, which fully meets the requirements of the development of the pharmaceutical field for the medicinal recombinant

protein, and promotes the better development of the pharmaceutical field.

#### 4.5 Growth hormone

Growth hormone, like medicinal recombinant protein, is also the product of biological genetic engineering. It also plays a very important role and great value in the field of medicine. Growth hormone is essential in the treatment of dwarfism. In the past, there were few sources of growth hormone, which was mainly extracted from the human pituitary. However, at present, the DNA recombination technology in biological genetic engineering can quickly extract growth hormone, which has brought more gospel to many patients with dwarfism.

#### 4.6 Anticoagulant enzyme

The deficiency of anticoagulant enzyme is generally an autosomal dominant disease, and patients with this disease often show lower limb edema. Antihemagglutininase can be produced by biological genetic engineering. The specific process is as follows: firstly, the goat is used as the reactor, and then the corresponding genes of human body are transferred to the carrier through biological genetic engineering technology. Then the obtained recombinant DNA molecules were transferred to the goat, specifically the goat fertilized egg. [8] Finally, the baby goat born of the goat will obtain such a gene, and the milk secreted by the goat will also contain anticoagulant protein, through which the anticoagulant enzyme can be produced.

#### 4.7 Disease diagnosis

At present, in most hospitals in China, the diagnosis of diseases is carried out by means of nuclear magnetic resonance and CT scanning. Although this diagnostic method can help doctors judge the disease, there will be some errors. Biological genetic engineering can help doctors make more accurate judgments and detect the actual situation of patients' diseases. In addition, biological genetic engineering can also treat many diseases, such as diabetes and dwarfism mentioned above. In traditional diabetes treatment, insulin injection is the main treatment. But genetic engineering can be used to treat diabetes at a genetic level.

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# Review on Doris Lessing's Particularly Cats

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**Abstract:** Doris Lessing's *Particularly Cats* records her life intertwined with cats that she has kept in Africa and London. Her exquisite writing shows spiritualism of cats, which is naturally associated with women, especially in regard to their motherhood, courtship, and relationship with others. In doing so, Lessing intentionally adds bystanders' opinions to these problems, and bystanders' view provides us a special angle to ask ourselves problems that women have faced but have been overtly overlooked. So in this review I argue that Lessing conveys her deep concern about women's living condition while describing cats and calls for attention to find a way out to women's issues.

**Keywords:** Women; Motherhood; Freedom; Relationship

Doris Lessing's *Particularly Cats* was published in 1967. The book begins with an account of when she was growing up, in the 1920s, on a farm in Rhodesia(now Zimbabwe) and it ends with her, some thirty years later, living in a spacious house in a good neighborhood in London; and all the way through, there are cats, domesticated cats, wild cats, intelligent cats, mad cats and cats accompanied her all through her life. By writing cats, Lessing shows her deepest concern for women's living state. She covers topics on women's conflicts - freedom and duty; loneliness and companionship, which, on the whole, mirror the mundane and glorious lives of human beings, women in particular.

Lessing's early life with his parents on a farm is not easy, at that time, beasts of all sorts, each in its own way, is a working problem for young Doris and her parents. One episode is that cats drop one litter after another so that their place is at one point overrun with about forty cats and the whole family have to deal with the extra number. The mother, who reluctantly drowns extra cats, expects the father to do the job. Sadly the father and little Doris have to round cats all up in a room and use a revolver to shoot all of them. What this episode strikes me mostly is because Lessing uses an extremely calm tone to relate all this, but the coldness behind this tale exudes strong emotion that pounds every reader's heart. I can't help thinking: how could a young girl bear such a bloody scene and pretend nothing happened? As I continue to read, Lessing's illuminating remark seems to give me an answer:

"After a certain age – and for some of us that can be very young – there are no new people, beasts, dreams, faces, events: it has all happened before, they

have appeared before, masked differently, wearing different clothes, another nationality, another color; but the same, the same, and everything is an echo and a repetition; and there is no grief even that it is not a recurrence of something long out of memory that expresses itself in unbelievable anguish, days of tears, loneliness, knowledge of betrayal – and all for a small, thin, dying cat"(Lessing, 17).

Detachedly, she implies her sadness over a dying cat she once kept. Taste of bitterness by the loss of that cat explains her indifference towards those dying cats killed by her father. "Everything is an echo and repetition", I think, what she wants to express is that pain is the chance given to reconcile with our old wounds. She seems to have already had a sharper understanding about twists and turns of life.

With the novel progresses, Africa switches to London, in Lessing's house, 25 years later. She has a grey cat who is the most beautiful cat she has ever seen:

"Grey and cream, her front and stomach a smoky gold, with half bars of black at the neck... [her face, too] penciled with black—rings around the eyes, streaks on the cheeks... an exotically beautiful beast... not at all afraid... stalked around the house inspecting every inch of it, climbed up on to my bed, crept under the fold of a sheet, and was at home." (32-33)

Through her description, I think Lessing's become uncharacteristically besotted, but again Lessing breaks my expectation. While she says those complimentary words, she coldly adds: "there is no glossing it, she's a selfish beast."

Her objectivity seems to warn us: she is more likely to be drawn to the creature's spirit instead of appearance. She recalls a battle with grey cat that finally makes her cracked. Grey cat would rather starve to death than eat food offered by Lessing. Though Lessing finds grey cat self-centered, she also approvingly implies the cat's high self-esteem, as she is also being lenient, writing: "the basis of her dandyism over food is the neurotic hostility and suspicion towards it of a child with food problems." (34) She thinks grey cat's stubbornness is due to a lack of mother's love that leads to variable forms: she is neurotic, overanxious and fussy. She is a coward who "will instinctively creep under anything that shelters and will never play without being observed;" (40)

As grey cat grows older, Lessing compares her with a young girl who is just going through a stage of "courtship". She attracts lots of "suitors" . In her backyard, her "suitors" -

“lined up on the garden walls. First, the sombre old winter cat, king of the back gardens. Then, a handsome black-and-white from next door, his son, from the look of it. A battle-scarred tabby. A grey-and-white cat who was so certain of defeat that he never came down from the wall. And a dashing tigerish young tom she clearly admired. No use, the old king had not been defeated.” (36)

The battle to win her is going on for weeks with old ugly cat defeating all others. Interestingly, a couple friends visit Lessing's house who become the witness to this whole process. The couple's conversation, in my opinion, is what Lessing uses as spice to women's issue that she concerns. The couple has very different opinions. S., the woman friend feels what happened on grey cat is unfair. She sympathizes with her - “how frightful and unfair it was that the princess could not have her choice”. However, her husband, H. holds: “that was entirely as it should be; a princess must have a king, even if he was old and ugly”. (37) Lessing shows two totally different mindsets of men and women, which raises a question about freedom of women: whether ‘freedom’ means women's complete autonomy over her own body just as S. says.

In parallel with the discussion of ‘free women’, Lessing also devotes length to the issue of a great nature of women – motherhood, which provides a breaking point to push the discussion further. Grey cat gives birth to litter after litter and kittens' fate becomes uncertain. Lessing hears an old bachelor complaining about it - “they never stop having kids, but they don't look after them, do they?” (50) Openly, women and cats are again closely bound together to let us think about what motherhood really means to a woman and whether being a mother becomes a impediment to women's development. Bachelor's complaint stressed here represents most men's opinion, or it might imply the whole society's value for in his words we do sense expectation and demand on a mother. This duty gives rise to an ambivalent situation that wanting freedom and having kids seems incompatible with each other for a woman. A woman who abandons her kids would be regarded as a bad mother commonly and women seems to be the froup who is always blamed.

I think Lessing's writing on two cats of being mother gives us some clue to her view on these questions. “Anyone in the house is disappointed about grey cat.” “Being a mother, grey cat is disastrous who kills the firstborn of her first litter and repeatedly tries to desert the rest.” (43)

We can genuinely feel what people's attitude toward grey cat, but she is self-centered, impervious to all of this. Her behavior is certainly not approved but I am wondering: could this be counted as a kind of freedom to always be what she wants to be? Even though she defies convention.

Black cat, who comes into the house after grey cat, is a tender and loving mother. “When she is nested

among her kittens, one slender jet paw stretched over them, protective and tyrannical, eyes half-closed, a purr deep in her throat, she is magnificent, generous - carelessly sure of herself.” (45)

Though it is easy to judge which one is a responsible and caring mother, the two types that Lessing shows add a new dimension to freedom of women - there is no real ‘freedom’, but if things you do is out of your own free will, it will mean something.

In people's disputes on sterilization of cats also arouses perplexity on women's issue. People in the neighborhood maintains the same attitude: “it isconsideration cruel to let a cat have kittens – with vehemence, with hysteria.” (50) But cat-lovers also express indignation: “why couldn't those doctors invite a birth control for cats? it was not right for us to steal their real natures from them, to suit their convenience.” (52) The sadness of this dilemma is showed by deteriorating change of Lessing's cat after being ‘doctored’. She remarks: “her confidence had been struck. The tyrannical beauty of household had vanished. The preemptory charm, the heart-breaking tricks of head and eye – all gone.” (53)

Not only women's issue is discussed in the novel, Lessing also emphasizes the point that power relation is ubiquitous in all human relations. She shows that her two cats are always competing with each other. They are always aware of each other's existence and one cat's movement must ignite the other's reaction. For instance,

“when black cat gives birth and is lying, luxuriant, among her kittens, grey cat, even though she herself loathes motherhood, sits across the room, envious and grudging, and all her body and her face and her bent back, ears saying: I hate her, I hate her.” In games, grey cat - the winner to catch a bird would seem to show off to black cat: “look, watch me, look what I can do that you can't.” (73)

Each cat is a mirror of the other to reflect her uniqueness and peculiarity. However, the concentration on rivaling makes them fall into disgrace and lose their charm. This can be referred to all human beings, according to Foucault, we know that power exists in all different forms of relationship,

“A society can not exist without power relations, which means the strategies

by which individuals try to control and command others' conduct. He advocates that, human beings shouldn't try to dissolve power relations in the utopia of absolutely transparent communication, on the contrary, human beings should gain the management skills, the rules of law, the distinctive spirit of a culture, the virtue and the practice of self, which will make people allow themselves to play the games of power with as little domination as possible” (Power/Knowledge 12).

As for women, how to filter those complaint and win more freedom in face of society's expectation,

Foucault has suggested that what she needs most is to gain a more distinctive spirit of herself. I think Lessing agrees with Foucault and her definition of 'charm' gives a solution. Lessing remarks:

“what is charm then? The free giving if a grace, the spending of something given by nature in her role of spendthrift. But there is something uncomfortable here, something intolerable, a grittiness, we are in the presence of injustice. Because some creatures are given so much more than others, they must give it back? Charm is something extra, superfluous, unnecessary, essentially a power thrown away –

given. When grey cat rolls on her back in a patch of warm sunlight...that is charm. When grey cat rolls...but the eyes narrowed on black cat, it is ugly.”  
(74)

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# Research on the Employment of Graduates in the Development of Higher Education

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**Abstract:** In order to fully understand the development trend of the employment market for university graduates, the research combed the official report data cited and analyzed in the related studies, and analyzed the current employment competitiveness and the quality of life of graduates in the Internet plus labor market, and found the following problems. In the study, solutions are put forward. First, students need to change their learning orientation at the student level. Secondly, the educational system needs to be optimized at the managerial level of the University. Finally, the Internet plus labor market needs further governance at the national level.

**Keywords:** Internet plus labor market; Higher Education; Employment of college students; Quality of life; Employment direction;

## 1. INTRODUCTION

Over the past decade, taking the employment market of fresh graduates of higher education in China as an example, the number of fresh graduates has continued to grow, with a year-on-year growth rate of 1.2% to 4.9%, and the growth rate fluctuates periodically in a cycle of about 3 to 4 years<sup>[1]</sup>.

For historical reasons, China's higher education is divided into three types: junior college education, undergraduate education and graduate education. According to the public data on the official website of the Ministry of education, in the employment market of college graduates in 2020, junior college graduates account for about 26%, undergraduate graduates account for about 65%, and graduate education graduates account for about 9%. The demand difference between the supply and demand sides of the employment market of college graduates leads to about 20% to 30% of graduates are not satisfied with their initial employment, resulting in a high short-term turnover rate of graduates' initial employment. The short-term turnover rate refers to the proportion of graduates leaving before the end of the probation period after their initial employment<sup>[2]</sup>.

The research focuses on the employment mode of university graduates in the Internet plus labor market and the construction of supporting social security facilities.

## 2. THE BASIC COMPOSITION OF THE INTERNET PLUS LABOR MARKET

At present, China's Internet employment platform is

divided into two modes. One is the Internet employment platform operated by some Internet service enterprises, generally including online shopping malls, online car hailing, takeout, errands, etc. the other is the Internet employment platform naturally formed by society, generally including technical services, shared office, online think tanks, online psychological services, etc. The social acceptance of this model still needs to be improved<sup>[3]</sup>. Most of we media believe that this phenomenon is a waste of high-quality talents in China. The full-time employees engaged in the we media industry reached 3.7 million, including 31.6% of those with college degree or above. In short, in the enterprise self operated Internet platform employment market, social public recognition tends to college graduates to engage in e-commerce, we media and other industries, rather than takeout, errands and other industries.

The Internet employment platform under the natural market model that the Chinese government is committed to promoting. Because the labor service price of highly educated and high-quality employees is relatively high, most small and medium-sized enterprises do not need to hire highly educated and high-quality employees for a long time, so these small and medium-sized enterprises can release the demand for labor outsourcing for highly educated and high-quality talents, and college graduates can screen labor orders on different platforms and sign online<sup>[4]</sup>. Aiming at the natural market model of college graduates, the Internet employment platform has realized data integration with CHSI, especially for majors such as computer, automation, medical nursing and management.

This model not only reduces the labor management cost of employment enterprises, but also improves the employment freedom of employees. However, from the perspective of the labor law, there is a long-term labor relationship between the employees and the platform in the company's self operated Internet employment platform<sup>[5]</sup>. From 2020 to 2021, the relevant departments focused on rectifying the long-term labor relationship violations of the company's self operated Internet employment platform, resulting in further violations of the labor law by some export platforms, express companies and errand companies. And other relevant laws and regulations. Therefore, with the gradual

normalization of the Internet employment market, the Internet employment platform under the natural market model (Figure 3) will gradually replace the self operated Internet employment platform (Figure 2).

### 3. INNOVATION DIRECTION OF THE COMPANY'S SELF OPERATED INTERNET EMPLOYMENT PLATFORM

China's Internet economy sprouted at the beginning of the 21st century. From 2000 to 2010, self operated Internet employment platforms of Companies in e-commerce industry, express industry, takeout errand industry and online car Hailing industry gradually formed a relatively mature market model. The self operated Internet employment platforms of these companies can provide relatively stable labor relations, but these labor relations have been found to be illegal in market supervision in recent years<sup>[6]</sup>.

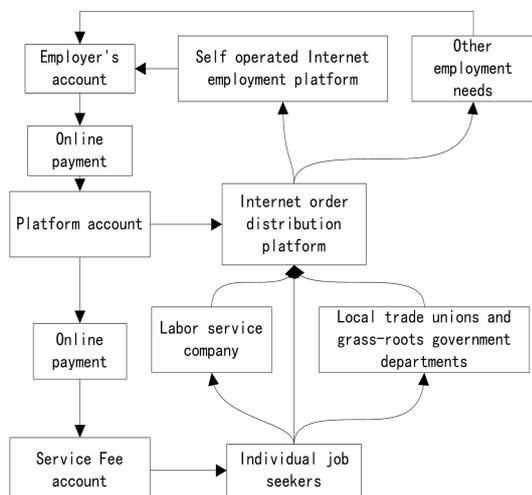


Figure 1 The reform goal of the company's self operated Internet employment platform

Figure 1 shows the integration mode of the company's self operated Internet employment platform and the Internet employment platform under the natural market economy mode in the future. The company's self operated Internet employment platform no longer directly signs online employment contracts with workers, but distributes labor outsourcing orders through the Internet employment platform under the natural market economy mode. In the natural four market economy mode, the Internet employment platform and employees introduce regulatory units or service units to provide legal medium and long-term labor relations management functions, but this management organization does not restrict workers to obtain short-term labor entrustment on the platform in their personal name.

### 4. ANALYSIS OF INTERNET EMPLOYMENT TREND OF COLLEGE GRADUATES

The Research Report of RUC Institute of labor and social security in 2020 shows a group of social research results. In the five-year continuous social observation, it is found that the following laws exist

in the Internet employment direction of graduates from 100 key colleges and universities in China.

Table 1 Comparison between Internet employment demand of college graduates and actual employment data (based on 2015 and 2019 data) (The unit in the table is percentage)

(Data source: Research Report of RUC Institute of labor and social security in 2020)

Internet employment direction	2015		2019		Rate	
	Expe ct	Occ ur	Expe ct	Occ ur	Expe ct	Occ ur
We media	12.6	4.3	12.1	9.3	-4.0	116.3
Domestic E-commerce	5.2	5.6	11.8	12.5	126.9	123.2
International E-commerce	7.9	8.9	13.7	14.2	73.4	59.6
Senior Manager (part time)	18.7	1.5	19.5	2.3	4.3	53.3
Freelance designer	15.3	7.8	18.6	9.1	21.6	16.7
Freelance writer	8.4	3.5	9.5	4.3	13.1	22.9
Takeout waiter	0.8	11.4	4.7	15.2	487.5	33.3
Online car driver	1.3	12.4	6.5	14.3	400.0	15.3

The data in Table 1 compares the relationship between the Internet employment demand and the actual employment data of graduates of key colleges and universities in China in recent five years. Some data have cross statistics, so there is no statistical total data.

The statistical method of score data is the hundred mark system score data of questionnaire examination. The mean data obtained by the arithmetic mean method is used as the data in the table, and the Rate data is the year-on-year increment data.

The data in the table shows the following rules:

1) Compared with the data between 2019 and 2015, the evaluation ability of college graduates on themselves and society has improved, but the actual performance is still unsatisfactory. The social mind of students in this age group is still in the stage of physiological development.

2) The preparation process of college graduates in the face of employment is blind. Most college graduates will participate in a large number of training and obtain a large number of certificates during their study in school.

### 6. SUMMARY

China Internet plus labor market supports students' first job after graduation in the Internet plus labor market. The University's education system basically supports students who are more competitive in the Internet + labor market. However, there is an imbalance between supply and demand between the university education system and the labor market, and

there are also some differences between the employment needs of students and those of employers. There are also a lot of objective facts that there is not enough platform for high school graduates' human resources demand to get enough human resources of university graduates. The employment environment of graduates will be fully assisted by the Internet plus labor market, and the future employment market of graduates will be broad.

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# Urban Free-roaming cats Management: A Proposal for Population Management in Futian District of Shenzhen, China

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**Abstract:** As society continues to evolve and people's environmental awareness grows, more and more people are realizing the value of maintaining healthy relationships with animals. In the "steel forest" of the city, people can always find stray cats roaming about. While cats and dogs have become the pets of choice, due to abandonment and other reasons, many former pets have become homeless, stray animals. The number of stray animals (in this paper, it generally refers to stray cats) has increased sharply in major cities in China, resulting in social problems, such as disturbing residents at night, community health, resident safety, urban style and so on. Stray animal protection NGOs have gradually emerged, and there is a trend of growing and impactful social ideas, which is worthy of people's attention.

After COVID-19, the discussions between animal and animal have become more and more important, because animals began to react against human beings, and their influence on human society have arguably increased. Trap-neuter-return (TNR) programs were once regarded as a good way to reduce stray cat populations, but after conducting in-depth research, we believe that "local knowledge" should be applied to community self-management. We conclude that each community should help stray cats by co-opting participation from residents, raising a community "stray animal rescue fund" to fund such initiatives! This would enable current initiatives to evolve from mere sterilization campaigns into a broader co-existence between humans and animals in communities.

Stray cat rescue is actually a management problem. The management of stray cats is the epitome of grass-roots governance in Chinese society. We believe that under the current situation, it is necessary to use community autonomy as the backbone, further promote animal protection legislation, build animal welfare as a concept, cooperate with animal rescue organizations, improve the level of animal welfare, and cooperate with various parties to adjust and improve the relationship between human and animals.

**Keywords:** Free-roaming cats; Free-roaming cats protection; TNR; Community autonomy; Government

administration

## CHAPTER 1 INTRODUCTION

### SECTION I RESEARCH BACKGROUND

#### 1.1.1 The cause of free-roaming cats

By definition, a free-roaming cat is "a cat that is not confined in a house or other type of enclosure[1]." It includes pet cats that are allowed to be outdoors, stray cats that are abandoned or lost, and feral cats that are born wild[1]. The term 'free-roaming cats' (FRCs) in this paper refers to unowned stray and feral cats.

Overpopulation of FRCs has become a global concern. There are approximately 0.5 billion FRCs worldwide in 2021[1]. Cats' high fecundity is a fundamental contributing factor of the increasing population. A study aimed at estimating the reproductive capacity of naturally breeding FRCs showed that most cats gave birth at ages younger than 1 year and produced a mean of 1.4 litters per year, with a median of 3 litters per year. Though the study also showed that about 75% of kittens died or disappeared before 6 months of age, under conditions of anthropogenic alms, FRCs could be prolific breeders and yield a lower mortality rate.

As economics sprawls up and pressure increases, more and more Chinese buy pet cats in search of companions. According to 2020 Chinese Pet Industry White Paper, there were approximately 27 million pet owners in China in 2020 with an 10.2% increase annually, and the number of pet cats in China reached 48.62 million with an 10.2% increase annually[2]. While pet cat industry has skyrocketed for the past five years, legal provisions regarding pet cat ownership and social awareness concerning cat behaviors and expenses are inadequate. Some pet owners buy cats without consents from their family members or landlords and are forced to send their cats away or abandon them. Due to a lack of regulation, some pet dealers even discarded mature, intact cats on street or sold them to meat market. Financial inability also contributes to cat abandonment. About 56.4% of the pet owners reported that medical treatment is expensive. In cases of large medical expenses, some owners, especially those with low monthly salaries, would abandon their pets.

Besides abandonment, anthropogenic ‘subsidies’ such as provision of food, shelter and vaccinations also play a role in supporting a large FRC population size. More than 50% of the Chinese urban neighborhoods has at least one FRC caretaker, who voluntarily helps to enhance the cats’ survival capability. These caretakers remove natural constraint of food availability and intraspecific competition, enabling a population density that is much higher than would be under natural circumstances. Since the majority of Chinese FRCs lives in urban areas, where most predatory species – such as wolves, wild dogs, snakes, and hawks – cannot be found, FRCs enjoy an environment free of predation. It is estimated that currently, the worldwide FRC population is even greater than the population of all wild cat species added together[3].

#### 1.1.2 Impacts of free-roaming cats

In respect to their impacts on humans, FRCs can cause several zoonotic diseases, including rabies, toxoplasmosis, cutaneous larva migrans, plague, tularemia, and murine typhus. Several of those diseases are reported to cause abortion, blindness, pruritic skin rashes, and even mortality in humans[3].

FRCs also exert a large influence on wildlife by predation, fear-related behaviors, hybridization, competition, and transmission of diseases. Hunting was previously believed to be the main food source for feral cats; however, recent studies have shown that about 80% of other unowned cats and 50%-80% of the owned cats also hunt[34]. Domestic cats (*Felis catus*) are culprits of 26% of reptile, bird, and mammal extinctions[3] and have contributed to more than 63 vertebrate extinctions<sup>1</sup>. In China, FRCs prey approximately 2.6-5.5 billion birds and 3.6-9.8 billion small animals, including reptiles, invertebrates, fish, amphibians, and vertebrates[4]. Besides direct predation, FRC fear-related behaviors can also affect prey population. The appearance, smell, and sound of cats can elicit stress responses from other animals and affect their foraging and defensive behavior, energy income and body condition[4]. Hybridization is another way of FRCs impacting wildlife. Direct or indirect extinction of native species can occur when free-roaming domestic cats mate with other native, wild cat species[4]. Competition with other species and transmission of diseases can also affect local wildlife. Studies have shown that FRCs can transmit toxoplasmosis, rabies, or feline leukemia to some vertebrates[45]. Given their influences, population management of FRCs is key to maintain a healthy ecosystem.

Section 2 research status of relevant laws and regulations

#### 1.2.1 Current free-roaming cats population management methods

It is estimated that stimulated large and small urban FRC population without any management methods have the potential to grow 18-20% per year, given sufficient resources. Due to their large potential, FRC population management is vital.

Existent population management methods include Trap-Remove (TR), Trap-Neuter-Return (TNR), contraception, euthanasia, reduction of anthropogenic feeding. Temporary contraception options were as effective as TNR in the short term (less than 5 years), but over a long term (more than 10 years), they were less effective than TNR or TR. Reduction of anthropogenic feeding is also effective. Although it can effectively reduce the cat population in a long term, it would lead to a sudden decrease of resource subsidization, resulting in a significant change in the FRC diet and pressure on the prey population[4]. It should thus be carefully supervised and conducted with several other methods to prevent excessive predatory competition among cats and reduce sudden change in the local ecosystem.

Studies suggest that high-intensity TNR is the most effective population management strategy in terms of substantially reducing population size and minimizing preventable kitten deaths and lethal removal of adults when TR method is also conducted to support adoption of social FRCs and euthanize ill or injured FRCs.

Many well-known cat organizations, for example The American Society for the Prevention of Cruelty to Animals and The UK’s Royal Society for the Prevention of Cruelty to Animals, endorse TNR as "the most effective, humane population management for free-roaming cats." TNR was first proposed in Great Britain in the 1950s and became widely accepted in the 2000s[4]. Today, TNR colonies were conducted in Australia, Canada, China, Denmark, France, Israel, Italy, South Korea, New Zealand, Turkey, the United Kingdom, and the United States[4]. The current goal of TNR programs not only includes managing FRC population in a socially, ecologically acceptable size but also aims towards enhancing FRC welfare and reducing human-and-cat conflicts.

#### 1.2.2 Organizations and Laws Related to FRCs

So how to achieve stray cat population control? Usually, government legislation and civil organizations need to cooperate with each other. In general, the institutional construction of FRC in Europe and the United States started earlier, and the relevant laws and organizations are more mature, so it is meaningful to learn from them. An overview of some of the globally most well-known organizations and laws related to FRC management shows that a combination of government legislation and civil organizations may be the most effective

population management method.

#### a. International organizations and laws

##### a.1 The American Society for the Prevention of Cruelty to Animals (SPCA)

The main agency in the U.S. responsible for protecting animals and sheltering stray animals and stopping animal cruelty is the SPCA. The SPCA (the Society for the Prevention of Cruelty to Animals) has a relatively well-established system of institutions, with administrative and law enforcement departments, animal hospitals, and animal shelters working in tandem with each other. The animal shelters first examine animals from various sources, treat those with diseases, and then find adoptive families. Animals that have not been adopted after the expiration date are given euthanasia.

##### a.2 The Royal Society for the Prevention of Cruelty to Animals (RSPCA)

Founded in 1824, the RSPCA is "the world's oldest and largest animal welfare charity, with the primary focus of rescuing, rehabilitating, and rehoming or releasing animals across England and Wales"[4]. Working in partnership with other organizations who have the resources, expertise, and responsibility to support animal welfare campaigns, the RSPCA doesn't collect healthy stray cats but provides a cat neutering scheme to help tackle the increasing number of stray and feral cats across England Wales. As a member of the International Companion Animal Management (ICAM) Coalition, the RSPCA and other organizations develop guidance on stray dog and cat management. Their official website posts many scientific, humane guidance educating the public about pet care, animal welfare, wildlife conservation, and law enforcement related to farm animals and lab animals.

It is a legal requirement to have any dogs over the age of eight week microchipped.

##### a.3 German cat regulation

Germany has taken a different approach to the issue of cat management, pet cats need to be registered and reported to be issued an electronic code, and fines are imposed for abandoning them. In contrast, adoption activities are only extremely low cost or free. At the same time, the government's vigorous publicity and science education has made Germany one of the countries with the highest adoption rate in the world, with over 90% of stray cats finding new owners in a relatively short period of time.

#### b. Management and legal system of domestic stray animal protection

##### b.1 Management and legal system of stray animal protection in Hong Kong

Hong Kong has a relatively complete animal protection system, Chapter 167 of the laws of Hong Kong is the Dogs and Cats Ordinance.

##### b.2 Management and legal system of stray animals in Mainland China

China's stray cat rescue activities started late and are still not perfect in all aspects. In China, one of the dilemmas is that it is difficult to establish a legal and compliant stray-animal-rescue center.

Awareness and actions related to the welfare of FRCs started late in Mainland China. TNR colonies, or other means of population management, were mostly conducted by a small number of individual, voluntary citizens. In China, establishment of a rescue center requires the legal registration as a Private Non-enterprise Entities (PNEE), a series of audits on its qualifications, and political screenings of its founder(s). In addition to a strict, complicated administrative approval process, the center has to possess a high degree of openness (usually away from residential areas and water sources to avoid animal waste pollution) and clarify whether it would be included in the scope of demolition. Funding, employment, and facility can also be a problem. Rescue centers rely on public fundraising, but a small proportion of the society is willing to donate for stray animals. Concerns about human health adds to the difficulty of establishing a rescue center. Most contemporary non-governmental centers do not reasonably classify pets, actively or forcibly ignoring the habits and differences of stray dogs and cats.

Private spontaneous stray animal rescue organizations, as a marginal group among public welfare organizations, also have many problems at present: for example, there is confusion in the organizational structure, internal management deficiencies and organizational inefficiency. Stray animal protection organizations have proposed a series of conservation strategies that remain slogans; funding is scarce, space is scarce, and stray animals are backlogged and unadopted. But stray animal protection organizations are still proactively seeking to establish cooperative relationships with the government.

Overall, China's mainland animal protection laws and regulations are not sound enough, but many cities have introduced local policy documents, or have carried out some remedial measures.

##### b.2.1 Local regulations

China's mainland does not have a comprehensive law on animal protection, but there are corresponding regulations for dogs everywhere, which are these regulations do not have the effect of civil and criminal law.

For example, in 2006, Beijing had the "Beijing Municipal Regulations on Dog Breeding", Shanghai had the "Shanghai Regulations on Dog Breeding", and Shenzhen issued the "Shenzhen Regulations on Dog Breeding" on January 1, 2020, which is valid for 5 years. The adopter submits an application for adoption

to the district authority, the eligibility is reviewed, the adopter is assessed, the dog is registered, and the dog is implanted with an electronic chip free of charge. However, none of the above laws include stray cats in the Dog Breeding Regulations. In fact the management of stray cats either faces a legal void or is stuffed into the Dog Breeding Regulations for uniform treatment, which is obviously unreasonable.

#### b.2.2 Cooperation between private forces and government

At the end of 2020, Shanghai Public Welfare Service Center for small animal rescue and adoption officially accepted personal appointment for sterilization of stray cats, free of charge. In January 2021, Shanghai also drove the mobile car for free sterilization of stray cats into the community for surgery. As soon as the news came out, the community applying for medical car had made an appointment until the end of the year. Shanghai has the provisions of the regulations of Shanghai Municipality on the administration of urban stray dogs, and there are no corresponding laws and regulations on stray cats. With the appeal of many parties, legislative research related to stray cats has been launched this year. In the future, there may be a law to follow.

#### b.2.3 Urban FRCs rescue organizations

China has a large and active domestic private initiative of NGOs, Approximately 50 non-governmental organizations (NGO) have been established in 36 cities of Mainland China for the sake of stray animal rescue.

#### Section 3 research theories and methods

##### 3.1 The root of stray animal rescue is actually the management of stray animals

Some scholars believe that the root of stray animal rescue is actually the management of stray animals. In addition to repeatedly deliberating on the rescue details, it is also necessary to make a reasonable plan for the management of stray animals in the overall structure.

Some scholars have put forward mechanisms and ideas on the management of stray animals:

##### 3.1.1 ECOS campus governance mechanism meeting social requirements

Some scholars believe that the rescue methods of stray animals in the community should rise to the macro level of the governance mechanism of stray animals. Scholars believe that building an innovative governance mechanism system, pilot, improve and further improve the implementation scheme and governance concept is a stray cat governance scheme that can be adopted in the community and campus.<sup>2</sup>

##### 3.1.2 Triple governance structure: state, society and people

Because the proliferation of stray animals exists in

various communities across the country, some scholars believe that the stray cat governance scheme has a three-level structure: national governance, social governance and social public governance. Only by the cooperation and adjustment of these three levels can the governance of stray cats be the most effective. At the national governance level, scholars believe that it can coordinate the resource integration advantages of all parties and create an open governance system with the participation of the whole people. At the level of social governance, scholars call on major animal protection and rescue organizations and celebrities in the society to take the lead in participating in the rescue and governance of stray animals, so as to improve people's awareness and attention to the problem of stray animals. At the social level, scholars believe that people should actively support stray animal rescue activities, raise funds and adopt instead of buying.<sup>[6]</sup>

##### 3.1.3 Multi pronged governance model

Some scholars believe that the overall direction of stray animal management should be the organic combination of multiple governance, including the introduction of relevant laws and regulations on pet breeding, the maintenance of animal life and health rights and interests as soon as possible; Clarify the competent department and strengthen pet market management; Establish and improve animal shelters, jointly managed by experienced non-governmental organizations and the government; Improve people's awareness of stray animals and relevant laws and regulations, strengthen publicity through the media, and create a positive atmosphere for the whole people to love animals; Promote the concept of pet sterilization.<sup>[6]</sup>

##### 3.2 FRCs governance is an embodiment of the dynamic balance between China's authoritative system and effective governance

Inspired by Professor Zhou Xueguang's article on the dynamic balance between China's authoritative system and effective governance, the author believes that the problems and confusion in improving the welfare of stray cats, the rescue and governance of stray cats are fundamentally caused by the lack of mutual cooperation and coordination between social grass-roots governance and organizational autonomy.

On the one hand, some social organizations and the public want to solve the proliferation of stray cats through the community TNR project, but due to the restrictions of economy, manpower and law, they can not get the cooperation of national laws and policies, and can not achieve effective governance of stray cats. Therefore, it is expected that the problem of stray cat rescue can be solved, and the relevant literature of governance logic should be properly irradiated to achieve the dynamic balance between authoritative system and effective governance. Under the logic of

man governing man, man governing cat. The author also gets inspiration from the "unity of decision-making and flexibility of implementation, as well as the dynamic balance of Hierarchical Agency System" mentioned by Professor Zhou Xueguang, and believes that the unity of decision-making is reflected in stray animals, such as legal sanctions and abuse of cats and dogs; This article provides for the sterilization of stray cats. The flexibility of implementation is reflected in that if the law is formulated, it should be weighed according to local conditions to determine the implementation mode, depth and breadth of the law according to the economic development and cultural conditions of different regions.

The countermeasure to eliminate contradictions is to maintain dynamic balance.

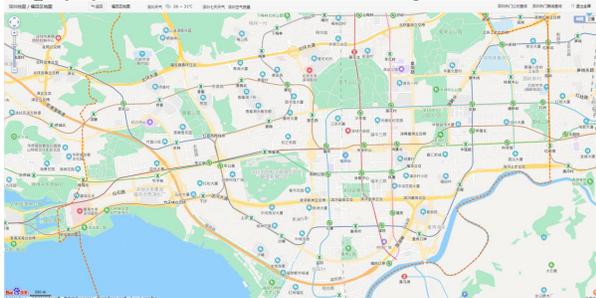
The author expects that if the state has formulated the law on the protection of stray animals, local communities, either through community foundations or through NGOs, will adjust flexibly in the implementation and maintain a dynamic balance between the two.[6]

Chaper 2 Study on the rescue of FRCs in Futian District, Shenzhen

Section 1 Introduction to field points

2.1.1 Selection of field points

Shenzhen was chosen to be the site of this field research because it is the hometown and habitual residence of the author. The author has a thorough understanding of the origin, development, and prospect of the campaign for the welfare of FRCs and a strong communication network with the local FRC organizations. Shenzhen due to its young age is a developing city – its FRC campaign is not as mature as it is in other Chinese metropolises such as Shanghai and Hangzhou – but it is unique for its dynamics, innovation, fast-growing technology, and a democratic government. Shenzhen has 9 districts, and the author chose Futian District as an exemplary location because it is the base of most Shenzhen animal welfare organizations and is home to 137 neighborhoods and a large population of FRCs and voluntary caretakers.



(In the yellow dashed area is the Futian District)

2.1.2 Investigation on the basic situation of FRCs in Shenzhen (mainly Futian District)

To gather a general understanding of public opinions and suggestions on the subject of community FRCs, we conducted a questionnaire consisted of 9 questions. In respect to gender, 65% of the respondents were females and 35% male, showing that women tend to be more concerned about the living circumstance of FRCs. From an age perspective, those whose age was between 18-30 years was the most attentive concerning the living circumstance and welfare of FRCs. Those statistics indicated that young adults might be the primary activists for population management and welfare of FRCs, but their high participation rate might also owe to their frequent use of cell phones. Among the 108 respondents, 69% held a bachelor or a higher degree, showing that the majority of residents in Futian District and people who cared about FRCs were highly educated. Overall, women who aged 30-45 years old were the largest group of respondents. Thanks to gender equality and educational opportunities, these women were able to invest money and time into the welfare of stray and feral cats.

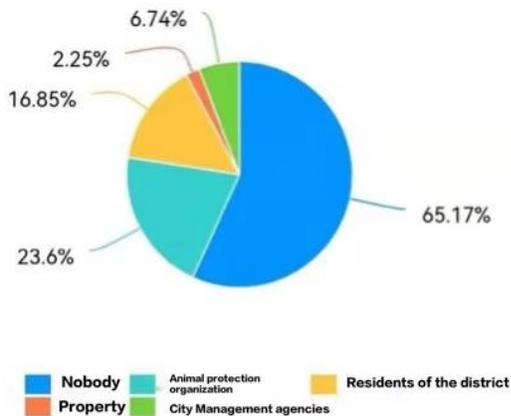
Most respondents (70% of the total participants) could see 1-5 FRC(s) every day; however, cats are alert, nocturnal animals. There might be a large population of unsociable cats hidden in neighborhoods. Some respondents (about 12%) reported that they saw more than 10 FRCs every day, indicating that some neighborhoods already suffered from overpopulation of cats.

Among those who filled out the questionnaire, 66% thought that stray cats did not cause a lot of trouble, which shows that residents of Futian District have a high tolerance for cats, which is inseparable from the relatively young group of respondents.

In addition, 21% of those who filled out the survey felt that feeding cats to produce litter had an impact on their own lives. In the author's one-on-one in-depth interview, professional members of the cat network made it a point to emphasize that it is not recommended for people to feed stray cats and litter, which will not only cause environmental pollution, but also is not conducive to catching stray cats and controlling their number. We also saw in this case that the feeding of the cat by some residents led to the resentment of other residents.

In the author's in-depth interview, there were also interviewees who reflected that some residents resisted TNR, which they believed, and some residents even took the initiative to stop the rescue organization from conducting TNR on stray cats, which reflects the difference in people's animal concept and is also related to China's cultural tradition of pursuing birth and life, which will also be developed in the in-depth interview section. Under the item of who is doing TNR, 65% of people chose that they did not see anyone doing TNR,

which shows that there is still a big problem in the implementation of TNR. With 2% of the properties and 7% of the city management agencies, it can be seen that the government is hardly involved in activities such as promotion and rescue of stray cats.



Finally, 17 communities want to solve the problem of the proliferation of stray cats through TNR, accounting for 12 percent of the total communities in Futian District. According to the author's volunteer experience in Shenzhen cat net, we roughly draw a conclusion that basically, most communities in Futian District have residents feeding stray cats independently.

## Section 2 Individual case study

### 2.2.1 Interview contents and key points of respondents in Futian District

How did the respondents "gather" under the question of FRCs ?

The problem of FRCs has become a problem of broad social significance because it is a social process and a historical process of human, animal and social interaction. The change of rescuers from novice rescuers to senior feeders shows the evolution of the protection movement of stray cats among the people, from almost no zoological knowledge to believing that sterilization is cruel to cats, to understanding TNR, to firmly supporting the cause of TNR. Everyone's growth experience, together, is the experience of the growth of stray cats and the evolution history of social organizations.

#### 2.2.1.a Motivation and mentality of respondents to carry out FRCs rescue

##### a.1 Why FRCs

Both stray animal rescue and wildlife rescue have the same characteristics, that is, human empathy and emotional projection to animals have a great impact on animal rescue. As most people have the same compassion, empathy, people project emotions onto animals. When people see the mood of pet cats and dogs, they can see people's emotional projection to

animals, which affects people's attitude towards animals today. In the past, the contradiction between people and wild animals was very prominent, including poisonous dead leopards and wild boars.

Another enlightening thing for the author is the transformation of the rescue object of Ms. Xiaoya, the person in charge of cat.com. Ms. Xiaoya first chose to rescue stray dogs when she was in college. However, because the dogs are large, aggressive and have to walk the dogs regularly, she has high requirements for the time and energy of rescuers. However, the cat needs a small range of daily activities, but only stays in the house, which is convenient for feeding. Therefore, she has changed from rescuing stray dogs to rescuing stray cats, because rescuing stray cats is more convenient for people. Now the government has more policies and regulations on dog keeping, while the regulations on cats are few, even missing. The reason is also in line with Ms. Xiaoya's transformation from "saving dogs to saving cats". It is precisely because stray dogs cause greater problems and impact in society, so the government gives priority to regulating the management of stray dogs.

Accordingly, there are no more human and material resources to manage stray cats. Therefore, at present, it seems that more non-governmental organizations are needed to rescue stray cats. Their process of rescuing stray animals is a process of self-education. Influenced by the publicity of animal protection, they are currently rescuing stray animals scientifically.

#### a.2 The uniqueness of the development process of relief organizations

China is a human society, different from the United States and Britain. China has a large population density, strong collectivism and close connection between urban people. As Fei Xiaotong stated in "local China", our society is a differential order pattern[6], In the interview, the author found that in the cause of rescuing stray cats, the community has the power of self linkage. For example, aunt yingzi's love relief group is a community force formed spontaneously. Aunt yingzi said that she began to pay attention to the stray cats in the community under the influence of her friends in 2012, feed and rescue the stray cats. She was the first to establish a caring rescue Wechat group in the community, and almost spread the members of the group by word of mouth, just like throwing a stone in the lake, from one to two, from two to more... In more than ten years, 33 caring people have gradually settled in the community. The feeding point is always clean. As a small group, community owners have the power of self linkage within the community. This community power drives people around to pay attention to small animals.

Like aunt yingzi, Ms. Xiaoya, the person in charge of

cat.com, has slowly expanded the relief cause from community relief. From personal assistance to now, Ms. Xiaoya has joined Shenzhen cat.com and become the person in charge of cat.com, leading non-governmental organizations to help stray cats in various areas of the city. The United States and the United Kingdom rescue animals is a non-governmental organization that directly publishes information from the Internet. Their management of non-governmental organizations is very perfect. In the early days of its establishment, China's non-governmental organizations were generally initiated by acquaintances and friends. Instead of setting up non-governmental organizations through the Internet. Our stray cat rescue takes the community as the core because the residents of the community are familiar with and trust in the community. Some communities have industry committees, which is a controllable range.

#### a.3 The penetration of scientism into animal rescue

Now we have done a better job in popularizing the science of zoology and biology. The concept of stray cats, from the original view of feeding to now, do we want to take cats to sterilization! These are the influences of scientism on the transformation of people's consciousness of animal rescue. The third thing respondents have in common in their psychological journey is that they gradually return to science. They all experienced the same mental journey from feeding and adoption to taking cats to sterilization. Under the influence of customers, President Wang has made clinical exploration in the field of sterilization from rescue, medical treatment to recognition of TNR. And promote the sterilization of stray animals to new customers. The author also has the same journey, from a blank of animal knowledge to the influence of aunt yingzi, feeding stray cats in the community, rescuing stray animals, and sterilizing stray animals, I also made a trap cage containing cat mint to reduce the stress damage caused to stray cats when trapping them. I used my own actions to influence the surrounding people to join the rescue group.

#### 2.2.1.b Reasons for TNR as the main method to control the number of stray cats in Futian District

In recent years, the popularization of Animal Science in China has become more and more extensive and comprehensive. Therefore, many cat lovers have spontaneously explored how to scientifically control the number of stray cats. On the other hand, the fierce conflict between humans and cats also pushes TNR, the most mature sterilization method at present, to the necessary path of stray cat management.

Ms. Xiaoya, the person in charge of catnet, revealed to us that in the early days of the establishment of catnet, there were some foreign students in the team. They actively contacted relevant foreign professors of

zoology and were recommended the path of TNR. Since then, TNR has been the main means of sterilization of Catnet. In the process of collecting data, the author also found that there are some problems, such as "hormone sterilization", This method is mainly a contraceptive method of continuously feeding progesterone to female cats, which has been popular since the middle of the last century. However, in an interview with President Wang of the pet hospital, we learned that this method has never been used in China. From the perspective of technology and responsibility, pet hospitals tend to use more mature and stable TNR as sterilization means. As cat net is the main sterilization promotion group in Shenzhen, they have repeatedly gone to various communities to organize TNR activities, which also has a great impact on Residents' choice of TNR for their cats or stray cats in the community.

As one of the residents who independently organized the feeding of stray cats earlier, aunt yingzi said that she started feeding stray cats in the community in 2012, and the number of stray cats started to be 5-6. One year later, she found that there were about 20 cats. Aunt yingzi advocates fine feeding. She specially understands the living habits, health conditions and frequent access points of each cat. Aunt stressed that first observe, and then go to TNR alone. Some cats are in poor physical condition, so she doesn't recommend forced TNR. Fine feeding of so many stray cats has exceeded her economic scope, so she set up a caring rescue group and hopes that more people will join in to better rescue stray cats.

It can be seen that different associations have different rescue ideas. Cat net is focused on the community TNR. My aunt observes first and then goes to TNR. The author believes that different non-governmental organizations have differences in the implementation of TNR.

#### 2.2.1.c Resistance and possible solutions to the rescue of FRCs

##### c.1 Difficulties faced by FRCs in the community

In terms of the quality of life of FRCs, some communities do not have an underground garage. Aunt yingzi said that her community does not have an underground garage. Stray cats sometimes hide under the car or sleep on the hood in front of the car. Human cat conflicts often occur. Ms. Xiaoya mentioned that when she went to the TNR of each community, the residents reported that there was overfeeding in the community, resulting in community garbage, and some residents complained.

##### c.2 Outside the community, the difficulties faced by FRCs in the park

Stray cats outside the community have few opportunities to contact people. They are more vigilant

and wild. Feeding is difficult because there is no fixed feeding point, so it is difficult to catch and count. When cat net volunteers went to the TNR in Lianhuashan Park, because there was no fixed feeding point in the park, the volunteers placed luring cages around the kitchen and garbage cans and waited for cats to enter the cage for a long time.

### c.3 Living conditions of stray cats on the edge of cities and suburbs

In the suburbs of the city, because there are many stray dogs, cats are more likely to be bitten by animals. Stray cats have become wild animals and their living conditions are very bad. No one cares, no one does TNR. It can be seen that it is the most favorable place to help stray cats in the community.

In the interview with the author, aunt yingzi thought that when cat net volunteers came to the community to do TNR, they did not consider the situation of each cat, which reflected the need to use local knowledge in the process of cat governance. The author participated in the research activities on wildlife protection in Heshun County, Shanxi Province. When solving the human animal conflict, NGO cat alliance is to visit local villagers to understand the wildlife in the mountains and contribute to the environmental protection of Heshun County, Shanxi Province with local knowledge, which will also be discussed later. Why do we choose to do TNR in the community, because the feeders in the community are familiar with the cats in the community and the environment of the community, which also reflects that when doing TNR in the community, we should fully contact the feeders in the community. Cats in different communities have different characteristics.

#### 2.2.2 The author's rescue experience of FRCs

##### 2.2.2.a Reflection on relief organizations on the basis of cat net and cat Alliance

I have been a volunteer in catnet for more than 2 years. In this process, I have a deeper understanding of TNR. I also wrote a paper on using synthetic biology to produce cat mint and reduce cat stress response in the process of catching stray cats, so that TNR can progress more smoothly.[6]

As far as my observation is concerned, cat net has a standardized process when doing community TNR. For example, it comes to the community to publicize TNR knowledge, communicate with feeders, uniformly implement shop arrest, send it to a pet hospital for sterilization, release it to the community in a few days, or find adoption. This is convenient and fast, but it lacks the mastery of local knowledge. For example, the most typical one is not understanding the physical condition of cats. Cat net's positioning is that it hopes to be a platform for knowledge dissemination. It does not want to bear more responsibility for rescue, nor is it able to bear the responsibility for rescue. Their problem is that

slogans often outweigh actions.

There are more stray cats in our community now. The author applied for cat net to do TNR in the community on the cat net platform, but she has applied for 2 months and has not replied yet. The author once applied for luring cages for different communities on catnet and found that luring cages can almost always be borrowed quickly (the number of luring cages is fixed). The always idle trap cage reflects the lack of independent placement of cat net trap cage from the side. Cat net only publicizes on the Internet and lacks practical action. They also hope that the community can manage the community itself, and hope that the community can provide TNR and catnet provide technical support. In addition to the experience of cat.com, the author also participated in the wildlife protection activities in Heshun County, Shanxi Province of cat alliance. I learned that when cat alliance helps local villagers solve the conflict between North China leopards eating cattle and humans and animals, it is first to go to the villagers' home to learn more about the local environment and ecology, and help the villagers communicate with the government, The conflict between man and beast was alleviated through economic compensation and subsidies<sup>3</sup>. Cat League also encouraged local villagers to take photos of leopards and submit them. Then many villagers really embarked on the road of wildlife photography and really fell in love with animals because of photography. This is a very good application example of local knowledge.

##### 2.2.2.b The necessity of local knowledge in the rescue of FRCs

In the cat alliance activities the author participated in, the application of local knowledge has a very obvious effect on the management of wild animals. Here, the author slightly expands the theoretical structure of local knowledge, and discusses the rationality of using local knowledge under the management of FRCs. The local knowledge put forward by Clifford Geertz is a methodology with relativism as the core, and its purpose is to resist the trend of globalization and modernization. Due to globalization and modernization, the cultures around the world are more and more similar and lack their own cultural differences. The application of local knowledge means paying attention to the uniqueness of the region and not blindly following the tide of scientism and Westernization.

However, the author believes that the current management of stray cats in Shenzhen does not pay attention to the unique living habits of stray cats, does not make management coordination according to the

complexity of human cat relationship, and lacks the use of local knowledge. For example, in the research on the rescue of stray cats, we see that large rescue institutions carry out the rescue method of "cats and dogs in the same cage", and some regions carry out the homogeneous "one size fits all" governance of cats and dogs in policies. The regulations on urban dog keeping is issued only based on the physiological characteristics and living habits of stray dogs, which is used to widely control all stray animals in the city. Under this unification, the problem of the proliferation of stray cats has never been solved. Shenzhen cat net also lacks the use of local knowledge. In the TNR process of cat net, it did not find out the situation of stray cats in different communities, and carried out tasks mechanically.

The form is greater than the essence, resulting in disputes and waste of time between cat net volunteers and community residents. This requires the rescue organization to negotiate with the community owners and property owners in advance to understand the situation of stray cats in the community. However, there are 135 officially registered communities in Futian District alone, which is a huge test for the human and material costs of existing NGOs. If the community owners who have the individual information of stray cats can invest in the cause of stray cat governance, the efficiency of stray cat governance will be greatly improved, which is the path of community owner autonomy.

In addition to the necessity of using local knowledge mentioned above, there is another important reason: stray cats are mobile animals. They adjust their own living conditions according to environmental factors and are not limited by administrative regions in human society, resulting in the dilemma of "collective action" faced by local governments in the process of governance. Nowadays, the interests between the community and stray cats are related. Stray cats are scattered in different regional environments, affecting the integrity and publicity of the environment. It is required that local governments in the region should make a difference in regional environmental governance, and the "economic man" characteristic of local governments makes it difficult for the government to govern stray cats. The investigation, supervision and maintenance of stray cats are more detailed and cumbersome work. The official organization is subject to its high administrative cost. It is impossible for the official organization to pay a lot of money and efforts on the problem of stray cats and animals, taking into account the differences between stray cats in different communities. Driven by the vital interests, the community will perform better in the details of governance.

### 2.2.2.c Conception and reality of "community stray animal rescue fund"

The author hopes to sponsor the stray cat rescue activity through the foundation. The inspiration comes from a public welfare teacher who highly recognizes the love activity of saving stray animals. She suggests that she can help find the foundation to sponsor. This inspired me that since NGOs can set up foundations, why not set up mutual funds in existing community organizations to manage stray cats in the community?

In the working meeting of "his stone" held by catnet, the president shared the experience of advanced animal protection volunteers all over the country, which made me realize that it is a good and feasible way to realize self-management in each community, encourage regional management, further extend from sterilization to animal civilization and create a friendly community.

The author is participating in the public welfare radio program of Shenzhen Minxin bridge - caring for stray animals. The host said that there are some urban villages in Shenzhen because of urban development, and there is no owners' committee.

The author believes that the implementation of TNR in the community can manage the rescue of stray cats and establish a rescue fund through the owner's autonomous management. Other social NGOs can devote more energy to urban villages. Through community autonomy, some advanced communities give priority to doing things well and drive other communities, so that links will be formed between communities. Then NGOs like catnet can focus more on areas where governance is not good.

## Chapter 3 Summary and Prospect

### 3.1 Full text summary

#### 3.1.1 The role and problems of existing laws and national governance in the rescue of FRCs

The government can play a leading role, issue regulations, regulate civilized pet raising and rule by law the abandonment of pet cats. However, due to the economic considerations of the local government, it has difficulties in dealing with the problem of stray cats. It is impossible to cover all aspects, and there is no special financial subsidy.

#### 3.1.2 The role and problems of social organizations in the rescue of FRCs

Social organizations provide professional rescue platforms for stray cats and share rescue experience. However, the quality of social organizations is uneven and there is a shortage of relief funds.

#### 3.1.3 The role and problems of people and communities in the rescue of FRCs

The problem of stray cats is closely related to the life of community residents. It is the best way to mobilize community residents to solve the problem of stray cats. But there is a shortage of funds to rescue FRCs.

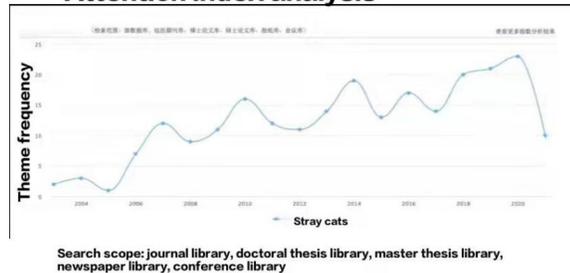
It is precisely because the state, social organizations and the public have their own strengths and weaknesses in the governance of stray cats. The author believes that the most effective and humane governance plan for stray cats should include tripartite cooperation. On the one hand, the state, as the most authoritative and influential institution, can issue policies. On the one hand, social organizations have experience in the habits and rescue of stray cats and take the lead in the implementation of governance. On the other hand, the active investment and cooperation of the public can solve the current problems of shortage of funds, manpower and materials.

### 3.2. Discussion - why is the community relief foundation feasible

#### 3.2.1 Starting from the impact of the epidemic

Covid-19 has a great impact on human civilization. Since the society believes that the most primitive disseminator of the virus is wild animals such as bats, scholars have had a strong interest in stray cats, which live with humans day and night, and the research on stray cats has reached an unprecedented peak. The author believes that the current interest of human society in the management of stray cats reflects the urgency and importance of the governance of the proliferation of FRCs.

#### Attention index analysis



Due to the impact of the epidemic, major stray animal organizations are also facing a huge shortage of funds, resulting in the collapse of the backbone of rescue. Few people are implementing the community TNR project, and the number of stray cats has not been controlled in time. The shortage of funds and other problems faced by Shenzhen cat net at this stage forced the internal transformation of the organization, from TNR actors to TNR advocates, and lacked the ability and idea to really implement TNR. The establishment of the community foundation can solve the financial problems of Shenzhen cat net and other relief institutions and pay TNR fees.

#### 3.2.2 Community funds achieve a dynamic balance

Behind the problem of stray cat assistance is the multifaceted pull of national legislation, local adaptation and community autonomy. It is difficult to find a once and for all solution. However, this system

must go up and down despite difficulties, constantly adjust in the dynamic process, and find a temporary balance between the two. As a product of social people's mutual cooperation and strength accumulation, community fund can effectively meet the needs of the people, cooperate with the actions of social organizations in the management of FRCs, and implement the goals put forward by the state.

In addition, there is a ready-made organizational law for community funds. In the relevant regulations on owner autonomy of the civil code issued on May 28, 2020, it is mentioned that the matters jointly decided by the owners shall be voted by the owners with more than two-thirds of the exclusive area and more than two-thirds of the number. This regulation has legal source and high binding force. If the community fund becomes a matter jointly decided by the owners, the foundation will have authority, and the community stray cat assistance has also been affirmed and supported by most owners.

#### 3.3 Looking forward to the future and difficulties of community stray animal foundation

##### 3.3.1 Popularization of community funds

The organized and systematic community distribution is not uniform, the population flow in urban villages is large, and there are few stable personnel, so it is difficult to establish the owners' committee. Community funds cannot be established.

##### 3.3.2 Management of community funds

Where should the community fund be spent, who will manage the community fund and be responsible for the governance of FRCs are the problems that will be encountered after the establishment of the fund, but fortunately, some community residents are experienced stray cat rescuers, have full understanding and trust in their own community FRCs, and can take the important task of managing the community fund.

##### 3.3.3 The flow of FRCs.

It has been mentioned above that FRCs are mobile animals and are not controlled by administrative boundaries, a feature that poses a potential challenge for the use of the community fund. Stray cats travel between communities, so which community should take responsibility to take care of and pay for the TNR and living expenses of the cat?

FRCs are natural creatures and move back and forth without any constraints, perhaps sleeping in one community, eating food and running to another community. The stray cats themselves are mobile and not restricted by administrative areas, therefore, in the management and rescue of stray cats, each community uses local knowledge in order to govern the community in more detail. In short, only when national policies and regulations are universal, it is possible to take into account the interests of all parties.

**Investigation on the relationship between residents and stray cats in shenzhen**

What's your gender? [Multiple choice]

options	subtotal	The proportion
male	31	34.83%
female	58	65.17%
The number of valid entries in this question	89	

How old are you? [Multiple choice]

options	subtotal	The proportion
minors	8	8.99%
At the age of 18 to 30	34	38.2%
31 to 45 years old	27	30.34%
46-60 years old	18	20.22%
61 and older	2	2.25%
The number of valid entries in this question	89	

What is your final education level? [Multiple choice]

options	subtotal	The proportion
Primary school	1	1.12%
Junior high school	2	2.25%
High school	24	26.97%
Bachelor degree or above	62	69.66%
The number of valid entries in this question	89	

How many stray cats can you see in your community one day? [Multiple choice]

options	subtotal	The proportion
never	10	11.24%
1-5 only	63	70.79%
6-10	5	5.62%
10 or more	11	12.36%
The number of valid entries in this question	89	

What is your general impression of stray cats in your community? [Multiple choice]

options	subtotal	The proportion
It's cute and can makes me happy	47	52.81%
It doesn't matter	25	28.09%
It bothers me	17	19.1%
The number of valid entries in this question	89	

In what time have stray cats bother you? [Multiple choice]

options	subtotal	The proportion
Never bother	59	66.29%
Too noisy	18	20.22%
Feeding cats produces garbage	19	21.35%
Attacked me or scratched me	6	6.74%
Others, for example	6	6.74%
The number of valid entries in this question	89	

For example: 1. I feel sorry for the cat  
 2. Feeding can lead to further concentration and breeding of stray cats, but without feeding the cats will have no food  
 3. Stray cats breed so fast that it pains me to see more and more stray cats  
 4. Stray cats will chase me  
 5. I'm afraid of cats. They scare me easily  
 6. Stray cats keep me from getting around

Trap, Neuter, release (TNR) is a method to control the number of stray cats in a community through neutering. Do you know anything about TNR? [Multiple choice]

options	subtotal	The proportion
Yes	41	46.07%
No	48	53.93%
The number of valid entries in this question	89	

What is your opinion on TNR? [Multiple choice]

options	subtotal	The proportion
Did not know it very well	31	34.83%
Effectively avoid cat flooding	53	59.55%
Little effect	2	2.25%
Inhuman	5	5.62%
Others, for example	0	0%
The number of valid entries in this question	89	

Who is doing TNR within the scope of your observations? [Multiple choice]

options	subtotal	The proportion
Nobody	58	65.17%
Animal protection organization	21	23.6%
Community residents	15	16.85%
Community management	2	2.25%
City management agencies, such as street offices, etc	6	6.74%
The number of valid entries in this question	89	

If you want to solve the problem of stray cats flooding your community through TNR, please leave the name of your community [fill in the blank]

The name of the community	Number	The name of the community	Number
Huarun	6	Longgang Street Shihu Village	1
Xinghe	1	Daxin Village, Nanshan District	1
Changcheng Garden II	5	Xiangmi Lake I	1
Xinghai	1	Longgang District central community	1
litchi	1	Malaysia II	1
Hua Ting in the Zhengda Era	1	Condal Gardens	1
Yantian District Wutong Road leaning hill garden	1	Baoan District west building	1
Red hill Garden	1	Nantian Garden	5
South Sea Rose Garden	1	Zhongyue	1
Hailian Building	1	Areas outside Shenzhen	3

S Appendix 2

Research materials of urban Community stray Cat rescue policy management -- in-depth interview script  
Respondent Form

Type	Features	Numbers of interviews
Veteran rescuer	Experienced working staff	1
	An affectionate teacher	1
Rescue organization (Shenzhen Catnet)	Civilian aid leaders and volunteers	2
Pet hospital	Pet hospital directors and doctors	2
Property Management	Property Management Manager	1
Ordinary residents		1

The interview outline  
Veteran rescuer

Respondents	Serial number	The interview questions
Private rescuer	1	When did you start caring about stray cats?
	2	How many fixed stray cats are there and what is the feeding situation in the surrounding communities?
	3	As the leader of the private rescue group for stray cats in our community, how does your group rescue cats?
	4	What is the difference between your TNR and Shenzhen Cat's TNR? Concept, methods, etc
	5	Are there any human-cat conflict in the neighborhood? If so, what are the conflict?
	6	Did the property Management help solve the nuisance imagery? If so, what practical things have been done?
	7	What do you think about the use of rat poison in communities?
	8	What kind of help and support do you want from the property Management and the street office?

Rescue organization

Respondents	Serial number	The interview questions
The head of rescuer organization and Volunteers	1	When did you start caring about and rescuing stray cats?
	2	How long have you been volunteering at Shenzhen Catnet? How did you know about Shenzhen Catnet? What business are you responsible for?
	3	How many volunteers does Catnet have now? What are the main animal welfare promotions?
	4	What are the main problems encountered by the Catnet when doing TNR? How to solve these problems?
	5	What do you think about the use of rat poison in property?
	6	Are there any difficulties when doing park-TNR ?
	7	Has Catnet ever talked with the government about the difficulties? Does the government give any support?
	8	Do you have any opinion on implanting microchip into cats?
	9	What are the specific benefits that Catnet is seeking for stray cats at the vet hospital?

## Pet hospital

Respondents	Serial number	The interview questions
Pet hospital	1	How many stray cats do you have each month for de-sexing?
	2	Can you give a general description of the helpers who came to the hospital?
	3	What are the free rescue programs that hospitals can provide for stray cats?
	4	What is the physical condition of these stray cats?
	5	Many pet hospitals claims that there are not enough free spay indicators. What is your hope for the government?
	6	Do you think the property Management should take responsibility for the management of stray cats?

## Community property

Respondents	Serial number	The interview questions
Community property	1	Our community is a new community. Did the community have stray cats a few years ago? How many can you see with the naked eye?
	2	How many stray cats are there in the community this year? How do residents react to stray cats in the community? How are these stray cats?
	3	Do you know how many fixed feeding points there are in the community? What do you think of these fixed feeding points? Does feeding damage the environment? How to solve it?
	4	Have you ever seen a resident catch a cat and sterilize it? What measures have the property taken to control the number of stray cats?
	5	Have any residents complained about injuries caused by stray animals? How to solve it?
	6	Is there any hope for controlling the number of stray cats and building environmental sanitation in the community?

Appendix 3 Research materials of urban community stray cat rescue policy management ----- In-depth interview record

Interview record of stray cat rescuer

Interview time: July 20, 2021

Interview place: Nantian Second garden. Yingzi aunt, Mr. Chen

Major questions about the interview record  
community strength and differential order pattern

I started to pay attention to and feed stray cats in the community since 2012. I learned from the pet hospital that there was a Catnet in Shenzhen.

I have rescued 3 cats at my own home, and there are 5 stray cats in my community, all of which have been neutered. There is nobody feed the cats in the surrounding 5 communities, so the stray cats all come to my community to get food.

I have 9 years of feeding experience so I get more professional knowledge. I am the leader of the stray cat caring group in the surrounding community. There are 33 caring people in the group, mainly ladies. Funds raised in the group are used for feeding, neutering and treatment of stray cats, and the flow of funds is posted

in the group every month.

We do not agree with the collective capture of Catnet, because the physical condition of each cat is different. When the stray cats are captured and sent to the hospital, some individuals may have problems, but it is difficult to connect Catnet because they are not staffed enough. And there's not enough money.

There is no basement in the community, cats hide under cars, some cats are crushed by cars. Most of them are abandoned domestic cats, the survival rate of these domestic cats is very low.

Neutering cats is the most effective way to control stray cat populations. The civil power is too weak, hope the property to help promote scientific feeding, do not abandon, adopt instead of buying, put up for adoption and so on.

Transcripts of interviews with relief organizations

Interview time: July 29, 2021

Interview place: home

Interviewee: Ms. Xiao Ya, vice president of Shenzhen CatNet

Major questions about the interview record

I started rescuing stray cats while I was in college, and

I'm calling on the Internet to adopt instead of buy. Shenzhen Catnet was founded in 2018. I got to know it on the Adoption Day of Shenzhen. In 2019, I joined the Catnet and become a backstage volunteers.

Catnet now has more than 90,000 volunteers. We work mainly in pet hospitals, and we promote the adoption and neutering of stray cats. The funding sources of Catnet are as follows: 1. If you join a VIP member, you need to pay a 15 yuan membership fee, which will be used to pay TNR, buy a cage, and pay the water fee and meal fee during the charity sale. 2. Our sales funds will be used for the rescue of stray cats. 3. Together with THE Youth Development Foundation, we will provide fundraising activities for the rescue of stray cats only through Tencent monthly donation. Our money flow is posted monthly. Catnet provides a platform and resource integration for rescuers, as well as the welfare of stray animals

The government doesn't give propaganda or money support.

Because cats don't go out, it seems impossible to make chips for cats

The pet hospital provides 2 days of free hospitalization for stray cats, they also provides side cutting and neutering for female cats, and releases stray cats after their wounds heal, and there is a 40% discount for stray cats hospitalized.

Pet hospital interview record

Interview time: July 16, 2021

Interview location: Shenzhen Dingdang Pet Hospital

Interview subjects: Dr. Wang, Dr. Liu

From not knowing about sterilization to knowing about TNR through customers, but also constantly exploring their own professional fields, they agree very much in concept.

It is estimated that there are 10-30 cats every day, including domestic cats and stray cats, which are generally sterilized within the indicators, Some receive preferential treatment, others pay their own way.

There are individual rescue, group rescue (Not long ago, a caring person near the stadium caught three stray cats to be sterilized and neutered, all at their own expense, without fundraising.

After the stray cat is caught, we will carry out preoperative examination and routine examination according to the requirements of the rescuer. Anesthesia, analgesia and anti-inflammatory, postoperative anti-inflammatory are free. Generally, the hospitalization is free for the first 2 days, and the extra part will be charged 20-30 yuan per day.

Stray cats themselves may be potentially infectious, with 80% having stomatitis and respiratory problems. They also have poor immunity.

The government currently has no policy and funds to support the stray cats, I hope the government can give

some supports.

Hope the property management ordinance for stray animal rescue.

Interview record of community property

Interview time: August 15, 2021

Interview location: Shenzhen Yinhu property community

Interview subjects: Manager Liu

There were no stray cats in the new community a few years ago.

With more and more people feeding, it is estimated that there are about 20 stray cats in the community. Some residents like and oppose stray cats in the community because they are afraid of hurting their children. No cat plague.

There are enthusiastic residents in the community who catch cats for sterilization. In the past, the way to control the number of stray cats was to put poison. It was unkind, but there was no other way.

In case of occasional conflict between people and cats, the property will sometimes bear part of the economic compensation, hoping to standardize the management.

It is hoped that the owner committee will be established, and the representatives of the industry committee will discuss solutions.

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# The Relationship between Vocational Delay of Gratification and Work Engagement of Rural Physical Education Teachers: the Moderating Effect of Organizational Support

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**Abstract:** Objective: To explore the moderating role of organizational support in rural physical education teachers' vocational delay of gratification and work engagement. Methods: A questionnaire survey was conducted on 552 rural primary and secondary school physical education teachers in Hunan Province using the Vocational Delay of Gratification Scale, the Work Engagement Scale, and the Organizational Support Scale. Results: The correlation coefficient between the vocational delay of gratification and work engagement was 0.470, organizational support had a moderating effect in the relationship between occupational delayed satisfaction and work engagement, and the interaction term of delayed occupational satisfaction, organizational support, and the two variables contributed 31.6% to the variance of work engagement. Conclusion: Vocational delay of gratification was positively related to the work engagement of rural physical education teachers, and organizational support played a moderating role. Actively creating conditions to increase organizational support is conducive to enhancing rural physical education teachers' work engagement. **Keywords:** vocational delay of gratification; work engagement; organizational support; teachers

## 1 INTRODUCTION

In 2020, the Chinese government re-emphasized comprehensively strengthening and improving school sports in the new era and made systematic design and strategic deployment. The top-level design of the document points out the direction and provides a policy guarantee for the continuous promotion and development of physical education in China [1]. However, in practice, it has been reported that the current professional situation of physical education teachers in China is still not optimistic, facing the embarrassing situation of low social status, low salary [2], and marginalization of the subject, which reduces the motivation of physical education teachers and adversely affects the work commitment and work attitude of this group [3]. The extreme imbalance in spatial development due to the excessive gap between

urban and rural education is one of the biggest problems facing Chinese education. Some studies have reported that some rural teachers in China are seriously losing teachers. As most of the lost teachers are competent backbone teachers [4], how to stabilize and develop the rural teaching force has become a vital issue encountered in the development of rural schools. Researchers found that among rural teachers, physical education teachers in primary and secondary schools have the most prominent problems; their social status and treatment are low, the number of outstanding teachers is not sufficiently allocated, the level of teachers' teaching and research is poor, and the structure of rural physical education teachers is in urgent need of strengthening [5]. Teachers' work engagement is the degree of teachers' proactive attitude and love of their job. Individuals with high work engagement show positive work attitudes and behavior and better job performance [6]. A survey of rural junior high school physical education teachers in Yiyang City, Hunan Province, China, by Yi Chen [7] found that physical education teachers in rural secondary schools appeared to have lower economic incomes and poorer working environments, leading to low motivation. Some rural physical education teachers have a backward faculty and low work commitment, which creates a human resource dilemma. The work commitment of rural physical education teachers affects the quality of school education and students' physical fitness development. Therefore, it is crucial to launch a study on rural physical education teachers' work engagement.

One study found that personal resources are a significant predictor of work engagement [8]. An individual's propensity for delayed occupational satisfaction as a personal resource is closely related to work engagement [9]. Vocational delay of gratification (VDOG) is the tendency of individuals to postpone or forego short-term opportunities for immediate gratification that do not benefit their current job to pursue more valuable long-term career goals [10]. Individuals with a strong tendency to delay gratification are willing to put more effort into

their work and therefore may have higher levels of work engagement in order to better perform their work tasks, receive more rewarding benefits, and achieve a higher set of more valuable long-term outcomes, such as higher career goals.

Previous research has found that organizational support positively affects individual work engagement [11]. When organizational support is high, they are likely to reward the organization by fulfilling their organization-related obligations, thus increasing their level of work engagement, which is a powerful work resource for individuals [11]. Organizational support conveys to employees the recognition of their value, high-performance rewards and facilitates the short-term effects of reward system motivation, in addition to the fact that organizational support satisfies employees' socio-emotional needs and facilitates their intrinsic interest in their work, thus increasing their level of work engagement [12]. Given that in previous studies, individuals with high delayed gratification have a higher organizational commitment to the organization and work harder at work, it is clear that delayed gratification has an essential impact on individual career development and organizational development. Although the application field of vocational delay of gratification is expanding, there are not many studies related to career delay of physical education teachers in rural China. Based on this, this study investigates the relationship between the delay of gratification and work engagement of rural physical education teachers and the moderating role of organizational equity to provide reference and reference for promoting sustainable development of education and improving the work engagement of rural physical education teachers.

## 2 METHODS

### 2.1 Participates

From September to December 2020, a questionnaire survey was conducted in rural schools in Hunan Province, China. 552 questionnaires were randomly distributed, and 530 valid questionnaires were returned, with an effective rate of 96.01%. Among them, 231 (43.6%) were male, and 299 (56.4%) were female; 217 (40.9%) were elementary school physical education teachers and 313 (59.1%) were middle school physical education teachers; 182 (34.3%) were within 30 years old, 148 (27.9%) were 31-40 years old, 125 (23.6%) were 41-50 years old, and 75 (14.2%) were 51 years old or above. 168 people (31.7%) had a college education or less, 361 people (68.1%) had a bachelor's degree, and 1 person (0.2%) had a master's degree; 246 people (46.4%) had titles below the junior level, 207 people (39.1%) had intermediate titles, and 77 people (14.5%) had senior titles. All respondents were informed of the purpose of the study in advance. The survey was conducted with the consent of the teachers themselves and voluntarily.

## 2.2 Tools

### (1) Vocational Delay of Gratification Scale

The Vocational Delay of Gratification Scale, developed by Liu Xiaoyan [13], has 8 entries and includes 2 dimensions, named Job Delayed Satisfaction and Career Delayed Satisfaction, respectively. The scale was scored using a 4-point Likert scale, ranging from 1 = very non-conforming to 4, indicating very conforming. The Cronbach's alpha coefficients for the total scale and the 2 subscales of work delay and career delay were 0.776, 0.759, and 0.707, respectively, and there were significant correlations between the scores of the items in the scale and the total score, ranging from 0.476 to 0.828, respectively, showing that the scale had good internal homogeneity, as well as good structural validity and validity of the scale.

### (2) Work Engagement Scale

The short version of the Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli et al. [14] was used, which consists of 9 items and is scored on a 7-point Likert scale, with 1 representing never and 7 representing always. The higher the total score, the higher the work engagement. The alpha coefficient of this scale in this study was 0.88. Zhang Yiwen et al. [15] validated it in a Chinese cultural context and showed good reliability and validity.

### (3) Organizational Support Scale

The Chinese version of the Sense of Organizational Support Questionnaire, which was based on the one developed by Eisenberger et al. [16] and revised by Chinese scholars, was used to measure the sense of organizational support [17]. The questionnaire was scored on a 5-point positive scale (1=strongly disagree, 5=strongly agree) with six questions. The scores of the questions were summed and averaged, with higher scores indicating higher levels of perceived organizational support.

## 2.3 Statistical analysis

The data were analyzed using SPSS21.0 software and AMOS21.0 statistical software. Qualitative data is expressed in terms of the number of cases and composition ratio; Pearson correlation analysis analyzed the two variables. When analyzing the adjustment effect, the total score of each scale was calculated first, and then centralized processing was performed. The multivariate linear regression analysis method was used to analyze the adjustment effect;  $P < 0.05$  was considered as the difference was statistically significant.

## 3 RESULTS

### 3.1 General information

The details of the 530 rural physical education teachers are shown in Table 1, of whom 231 (43.6%) were male, 299 (56.4%) were female; 217 (40.9%) were elementary school physical education teachers, and 313 (59.1%) were junior high school physical education teachers; 182 (34.3%) were within 30 years of age, 148 (27.9%) were 31-40 years of age, 125

(23.6%) were 41-50 years of age, and 51 (23.6%) were 51 years of age. (23.6%), 75 (14.2%) were over 51 years old; 168 (31.7%) had a college education or less, 361 (68.1%) had a bachelor's degree, and 1 (0.2%) had a master's degree; 246 (46.4) had titles below the junior level, 207 (39.1%) had intermediate titles, and 77 (14.5%) had senior titles.

3.2 Correlation between vocational delay of gratification and work engagement

Firstly, the correlation analysis of career delay

satisfaction, mental toughness, and work engagement was conducted using Pearson correlation analysis. The results showed a significant positive correlation between the three, in which the correlation coefficient between job delay satisfaction and work engagement was 0.382, and the correlation coefficient between career delay satisfaction and work engagement was 0.454. The correlation coefficient between career delay satisfaction and work engagement was 0.463 (see Table 1).

Table 1 Correlation analysis of vocational delay of gratification and work engagement

	Work delay of gratification	Career delay of gratification	Vocational delay of gratification
Work engagement	0.382**	0.452**	0.463**

\*\*There was significant correlation at the .01 level (bilateral)

3.2 Analysis of the moderating effect of organizational support in the vocational delay of gratification and work engagement

See Table 2: Multiple linear regression analysis was used to analyze the moderating effect of organizational support in career delayed gratification and work engagement, and to avoid covariance in the data, the variables were first centralized before regression analysis. As seen in Table 3, the interaction term was statistically significant (p<0.05),

suggesting that there was a moderating effect of organizational support in the relationship between career delay satisfaction and work engagement, i.e., the higher the score of organizational support, the stronger the positive effect of career delay satisfaction on work engagement. The adjusted coefficient of determination of the regression model was 0.315, suggesting that the interaction term of vocational delay of gratification, organizational support, and the two variables contributed 31.5% to the variance of work engagement.

Table 2 Analysis of the moderating effect of organizational support in the vocational delay of gratification and work engagement

Model	Unstandardized coefficients			Standardized coefficients	t	P	
	B		Standard errors				
1	Constant terms		41.172	0.426	96.752	<0.001	
	Vocational delay of gratification		1.122	0.093	0.463	12.004	<0.001
2	Constant terms		41.243	0.399		103.238	<0.001
	Vocational delay of gratification		0.867	0.093	0.358	9.357	<0.001
	Organizational support		0.656	0.077	0.325	8.506	<0.001
3	Constant terms		41.038	0.411		99.919	<0.001
	Vocational delay of gratification		0.922	0.096	0.381	9.583	<0.001
	Organizational support		0.659	0.077	0.327	8.569	<0.001
	Interaction terms		0.026	0.012	0.078	2.050	0.041

5 DISCUSSION

5.1 Direct effect of vocational delay of gratification on work engagement

This study found that rural physical education teachers' vocational delay of gratification, as a positive personal resource in its own right, can play a positive predictive role in their work engagement. This result is consistent with previous studies [10],

such as Zhao's study showing that this positive predictive role of career delayed gratification on work engagement was confirmed among IT company employees. This result indicates that rural physical education teachers have a strong tendency for vocational gratification delay. Rural physical education teachers, who understand that the only way to achieve the goals they pursue is to devote

themselves to their work, will direct their behavior more toward the future and devote more energy to their work. Thus, they treat their work more seriously and responsibly and think more about the long-term. On the contrary, if teachers have a low level of vocational delay of gratification, they are inevitably unwilling to overthink their long-term personal development. They are less likely to give up immediate benefits and opportunities for immediate enjoyment, thus putting less effort into their work [18], which will inevitably further affect their work efficiency. In the long run, they will be accustomed to treating their immediate work negatively, unwilling to make long-term plans, and lower their work commitments. This also suggests that we need to work on two aspects: first, when recruiting teachers, the education department or school can include delayed gratification ability as one of the indicators to be examined and select employees with higher levels of delayed gratification; second, the unit should have to actively create conditions to enhance teachers' delayed gratification ability to benefit the overall development of the school.

#### 5.2 The moderating role of organizational support perceptions in the vocational delay of gratification and work engagement

This study found that organizational support moderates the relationship between career delayed gratification and work engagement. This indicates that a strong sense of organizational support promotes the work engagement of rural physical education teachers who tend to delay career gratification. This is probably because individuals with a high propensity for vocational delay of gratification seek satisfactory working conditions and salary packages and, more importantly, conditions that allow them to achieve their long-term goals. When schools can meet teachers' expectations of working conditions, salary packages, and other conditions, affirm their value, recognize the goals they pursue, and provide them with appropriate resources, teachers will face their work with a more positive attitude and enhance their work engagement according to the principle of reciprocity [9]. Second, previous studies have found that high delayed gratification individuals, who value the influence of the organizational climate more, are more likely to feel alienated from the organization because of the organizational climate [19], which shows that the level of school support for teachers, exceptionally high delayed gratification teachers, not only affects their level of work engagement but even their retention. Finally, solid organizational support conveys high-delayed gratification teachers' recognition of their value, high-performance rewards, and abundant coping resources, all of which contribute to stimulating and enhancing teachers' intrinsic interest in their work and motivating them to be more willing to engage in their work [20].

Thus, from a practical perspective, a sense of organizational support may be a practical thrust for increasing teachers' work engagement relative to rural physical education teachers' more stable tendency toward delayed career satisfaction. First, schools should pay attention to physical education and raise the status of physical education subjects, instead of giving predominance to other subjects and always making physical education subjects give way to other subjects [21]; second, they should improve physical education teachers' salary and welfare conditions and treat physical education teachers equally in terms of promotion and further education; finally, considering the nature of their work, schools should sometimes give physical education teachers some special care, depending on the situation, to improve their work initiative and motivation and ensure that they can devote more time and energy to their work.

#### ACKNOWLEDGMENT

This work is supported by general program of Humanities and Social Sciences Research of the Ministry of Education (18YJC890030).

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# Thinking on classroom Ideological and political Education of Statistics

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**Abstract:** Curriculum ideological and political teaching is the Chinese characteristic of Marxist education theory, it is the general trend of the teaching concept. Statistics is a subject widely used in all aspects of social development, with strong practicability. Realizing ideological and political teaching in class is a category that needs to be considered at present. This paper takes Statistics as the research object, and integrates curriculum ideological and political education into classroom practice teaching, to explore the feasibility of ideological and political education from three perspectives: integrating student-centered teaching concept, introducing Internet teaching tools into classroom, and combining current political events to carry out ideological and political education.

**Keywords:** Statistics Ideological education Teaching tool

## 1. INTRODUCTION

With the development of human society, the educational concept is constantly evolving. Through the study of theoretical knowledge and the verification of practice, people put forward a new teaching concept of ideological and political into the classroom. The classroom thinking is the inevitable result of the development of China's current education. It is the result of developing the Chinese education theory. Since 1978, the teaching concept of China's classroom thinking has experienced four stages of germination, formation, development period and deepening period. [1] General Secretary Xi also said that the idea of curriculum should be fully applied to the actual course education, which can be seen that the courses are trend. Statistics as the practical methodology discipline of the overall quantity characteristics and development rules of objective socio-economic phenomena. It has been unfortunate with the integration of thinking education in various aspects such as market surveys, securities analysis, and product sampling inspections.

Statistics is a subject that is widely applied to all aspects of social development, the content of this course includes the basic knowledge and research methods of statistics. Students should systematically master the basic principles and methods of statistics, so as to effectively carry out statistical activities in practice, flexibly master the basic tools and methods of statistics, and carry out various functions of

statistics. Therefore, in the process of teaching, you should flexibly apply teaching tools, with "students" as the center, integrate thinking, on the one hand, guide students to learn the basic knowledge and research methods of statistics, and improve students' overall quality. And guiding students to understand the time of politics, analyzing politics, let students have a more profound understanding of the time, and implement the integration of curriculum knowledge and courses. Based on this, this paper mainly discusses how to carry out ideological and political integration in the course of statistics teaching, in order to provide some reference value for statistics teaching.

## 2. IDEOLOGICAL AND POLITICAL ELEMENTS OF STATISTICS

Statistics is a practical subject. In the aspect of knowledge, students are trained to understand the system structure of statistics and master the basic theories of statistics. Basic method: in the ability dimension, cultivate students' flexible application statistical knowledge to solve practical problems, cultivate scientific research capabilities and innovative awareness, we need to be able to respond to the changing business environment, come up with innovative ideas and conduct innovative experiments. At the same time, in the teaching process of Statistics, ideological and political elements should be integrated into the curriculum to train students to be practical and realistic, rigorous and truth-seeking, patient and meticulous work style and serious scientific spirit. This part can integrate ideological and political elements from the perspectives of the history of statistics, the significance and quality requirements of statistical investigation, the error of statistical investigation, statistical collation, statistical inference, statistical report and so on.

First of all, starting from the development history of statistics, on the one hand, guide students to collect data and analyze the development history of statistics at home and abroad, and compare the reasons for the early development and prosperity of China's statistical thought and the slow development in the later period. We should sum up our historical experience so that we can have a basic understanding of China's national conditions. On the other hand, to learn the stories of domestic and foreign statisticians, to cultivate the scientific spirit, to learn the glorious deeds of outstanding statisticians who love the

motherland and work conscientiously in the historical development process of Statistics in China, and to enhance patriotism. Secondly, starting from the significance and quality requirements of statistical survey, guide students to see the essence through the phenomenon, strengthen practical ability and innovation ability, cultivate patient and meticulous work style and serious work attitude. At the same time, starting from the error of statistical survey, guide students to analyze the social and economic phenomena in real life, do not distort data characteristics, do not mislead readers, seek truth from facts, cultivate patient and meticulous work style and serious work attitude. Finally, from the perspective of statistical finishing, statistical inference, statistical report, guide students can use dynamic, develop, contact, comprehensive views, guide students to adhere to the materialistic dialectics, in the process of understanding the world and transforming the world, insist on development, explore the law, respect the law, keep pace with the times, insist on the unity of emancipating thoughts and truth from facts.

### 3 THE PRACTICE AND APPLICATION OF IDEOLOGICAL AND POLITICAL EDUCATION IN STATISTICS COURSE

#### (1) Integration of student-centered teaching methods

"Student-centered" teaching method refers to the determination of students' dominant position, the role of teachers in guiding learning, and the promotion and development of students' comprehensive quality. The implementation of this teaching method, on the one hand, we should train students to clearly recognize their role in the student process, we should train students to think and learn independently. On the other hand, teachers should be trained to change the thinking of traditional teaching, and give full play to the guiding role of teachers, so that students can learn, think and be curious about the development of things in the process of guiding learning. Therefore, the implementation of classroom thinking education can be integrated with "student" as the centered method. Especially statistically, because of its strong practical operation, it should play more subjective initiative, and correctly guide students to learn and deal with the impact brought by the Internet. This is both opportunities and challenges. Appropriate, on the one hand, it is possible to promote students' comprehensive development, and on the other hand, students can also promote students' active, personalized and sustainable development, and improve students' comprehensive quality.

#### (2) Introduce internet teaching tools to enter the classroom

In recent years, with the development of Internet technology, network teaching tools and teaching resources are increasingly rich. On the one hand, students can get over-rich learning materials from the Internet. On the other hand, teachers can apply

network teaching tools to enrich classroom teaching, which can be more convenient to integrate thinking. At present, common third-party teaching platform tools in universities include Classroom, Super Star, World University Town, Chinese University MOOC and so on. Through these platforms, resources can be shared and students can learn course content in advance and participate in course discussion. Taking The Super Star Erya platform as an example, teachers can build their own courses and upload teaching materials, including teaching videos, teaching courseware and teaching plans, and set chapter tests. According to chapter contents, discussions can be realized before, during and after class. Statistics is a very practical subject, and the introduction of Internet teaching platform tools can enable students to master knowledge better and faster, and integrate ideology and politics. For example, regarding statistics, the content and development of statistics, the content of nature and research objects, it can apply teaching platform tools, publishing lessons, such as introducing Chinese statisticians, talking about the statisticians and their deeds. You can also arrange the classroom task in advance, let the students understand history, interpret history, and discuss the contrast of Chinese and foreign statistics, speak in the classroom, tell why China's statistical ideas are prosperous than Western prosperity. The application of teaching tools, it can more integration of ideological and political, explain knowledge, to achieve the purpose of teaching.

(3) Combining current political events, theory and practice to carry out ideological and political teaching Statistics course knowledge includes methods and methods of statistical investigation, hypothesis testing, dynamic series and regression analysis, which are widely used in social practice. If there is a comprehensive survey in the statistical survey, you can analyze the analysis of several basic census in China. For example, the seventh population census in 2020, on the one hand, students can guide students to analyze the method of census, and the possibility of operational process and the possibility of error. On the other hand, students can be guided to collect the data of the seventh census and analyze it with the statistical data collation method, and analyze the connotation represented by the data itself with the knowledge of total index, relative index, average index and dynamic series. Further, it can be assumed that if a comprehensive survey is not adopted, which problems will be encountered and whether hypothesis testing can be implemented. Therefore, statistical classroom thinking teaching can combine the teaching, theoretical linkage, and to promote the basic methods and theoretical system of statistical foundation, cultivate statistical finishing and statistical methods. On the other hand, promote students to understand current politics, analysis of current politics, cultivate students' independent

thinking and learning ability.

### 3.CONCLUSION

Talent is an essential part of social development. Therefore, education strong country is the basic requirement of China's great dreams. The development of courses is the trend of social development, introducing courses to enter statistics. On the one hand, it guides students to master basic knowledge and research methods of statistics, on the other hand, it improves students' comprehensive quality, and guides students to understand and analyze current politics, so that they have a deeper understanding of current politics. This paper mainly explores the integration of statistical curriculum teaching and thinking education, and proposes relevant integration teaching recommendations: This paper discusses the feasibility of statistics ideological and political education from three perspectives: "student-centered" teaching method, introduction of Internet teaching tools into the classroom, combining current political events and combining theory with practice to carry out classroom ideological and political teaching.

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# The Research on the Innovation Strategy of Guangxi Cultural Industry from the Perspective of Cross-Cultural Cooperation

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**Abstract:** starting from the general research of cultural industry, this paper introduces the connotation of cultural industry. Based on the analysis of the current situation of the development of Guangxi cultural industry, this paper points out the problems existing in the development thought and development strategy of Guangxi cultural industry. On this basis, this paper puts forward the idea of the development of Guangxi cultural industry, analyzes it, and expounds the countermeasures and suggestions for the development of Guangxi cultural industry.

**Keywords:** cross-cultural cooperation, cultural industry, development

## 1. THE CONNOTATION OF CULTURAL INDUSTRY

The concept of cultural industry is translated from the English word culture industry. The so-called cultural industry refers to the production, reproduction, exchange and dissemination of cultural products and services through industrialization, informatization and commercialization. Its denotation involves literature and art, film and television audio-visual, scientific research, press and publication, information consultation, design and planning, covering three aspects of cultural property, cultural equipment and media carrier.

Cultural industry is an industry that produces cultural products, entertainment products and provides cultural services. Its main goal is to meet people's cultural needs. As far as the scope of the industry is concerned, the scope of the cultural industry includes the activities of providing cultural products (such as books, audio-visual products, etc.), cultural communication services (such as radio and television, artistic performances, museums, etc.) and cultural leisure entertainment (such as tourist area services, indoor entertainment activities, leisure and fitness entertainment activities, etc.), which constitute the main body of the cultural industry; At the same time, it also includes the production and sales activities of articles and equipment directly related to cultural products, cultural communication services, cultural leisure and entertainment activities, as well as the production and sales activities of related cultural products (such as handicrafts, etc.), which constitute the supplement of cultural industry.

## 2. ANALYSIS OF THE DEVELOPMENT OF

## GUANGXI CULTURAL INDUSTRY

2.1 The overall development of cultural industry is good, and its contribution to national economic growth has been improved.

In 2004, the added value of the cultural industry in the whole region reached 12.299 billion yuan (with the same scope of culture, the same below), and the proportion of added value of cultural industry to the total production value of the region reached 3.4%. This is 0.3 percentage points higher than the national average of 3.1 per cent. However, from the national cultural industry calculation data released by the State Bureau of statistics, the proportion of the added value of Guangxi Cultural Industry in the national cultural industry has reached 3.3%, while that of Guangxi in that year is only 2.2% of the total national product. This shows that Guangxi cultural industry is at a medium level in the country, with a certain foundation and great potential for the development of cultural industry.

2.2 The development space of traditional culture industry is large, and the emerging cultural industry gradually rises

From the internal composition and stratification of cultural industry, the relevant data show that in 2004, the value added to "cultural service industry" directly engaged in cultural activities in the whole region was 5.248 billion yuan, accounting for 43.4% of the added value of all cultural industries, which did not exceed half of the total value added; However, the added value of "related cultural service industry" providing cultural supplies, equipment and related cultural products has reached 6.851 billion yuan, an increase of 1.603 billion yuan over the value added by cultural service industry, accounting for 56.6% of the added value of all cultural industries. From the perspective of the proportion of added value of cultural services in the total regional GDP, it reached 1.5% in 2004, while the proportion of related cultural services reached 2%, the latter contributed more to national economic growth than the former. From the national situation, the proportion of added value of cultural service industry and related cultural service industry to the added value of all cultural industries is 48% and 52%, respectively, and the proportion of both of them to GDP is 1.5% and 1.6% respectively. The relevant cultural service industry is also slightly higher than that of cultural service industry.

### 3. PROBLEMS IN THE DEVELOPMENT OF GUANGXI CULTURAL INDUSTRY

#### 3.1 Development concept

With the improvement of the people's material living standard and the need for spiritual and cultural life, cultural industry, as an important part of national economy, is shouldering the important task of meeting the growing material and cultural needs of the people, which reflects the important significance and role of developing cultural industry. Therefore, governments at all levels are actively exploring and responding effectively to them, so as to take effective measures to promote the development of cultural industry and meet the spiritual and cultural needs of the people. Guangxi, as an underdeveloped area, is faced with a heavy task of economic construction and social development, and it is more difficult to develop cultural industry. Therefore, it is very important to make development strategy and choose the development path, especially in the renewal of development concept. As a programmatic document, the 12th Five Year Plan for the development of cultural industry of Guangxi Zhuang Autonomous Region has made overall deployment for the future development of Guangxi cultural industry. It requires the full play of the advantages of rich national cultural resources and rich historical relics in Guangxi, vigorously protecting and developing cultural heritage resources, accelerating the construction of Library City, theatre, cinema and other art performing places and The exhibition projects of Guangxi Art Museum, Guangxi Tonggu Museum, Guangxi Natural Museum and Beibu Bay museum will be carried out in-depth implementation of seven key projects for the development of cultural industry (infrastructure construction project, boutique production project, key enterprise cultivation project, park and base construction process, brand building project, talent team construction project and demonstration point construction project) to promote Guangxi The development of cultural industry.

#### 3.2 Development initiatives

Firstly, the cultural industry is faced with the problems of multi leader and multi management. From the perspective of functional division, the departments related to the development of cultural industry involve two major systems: Party affairs and administration, and also involved many departments within each system, including propaganda, culture, news, publishing, education, tourism and other departments and fields. Due to unclear responsibilities and unclear responsibilities and powers, it is easy to cause the phenomenon of passing buck and pulling off each other when facing some difficult problems. Therefore, it is urgent to establish a unified leadership or coordination organization to solve the problems of unified leadership, unified planning, overall promotion and overall promotion. Secondly, the improvement and supporting problems

of policy and measures. The development of cultural industry needs to have supporting preferential policies and incentives, and the policy lever is used to adjust and allocate various resources needed for the development of cultural industry, and to promote the rapid development of cultural industry with sufficient resources guarantee and efficient resource allocation. Thirdly, the lack of investment in the development of cultural industry. As a underdeveloped area, Guangxi needs a lot of capital investment in economic and social development. The problem of insufficient construction funds is the restricting factor of Guangxi cultural industry development. Guangxi has increased investment in fixed assets in culture, sports and entertainment industry year by year during the 11th Five Year Plan period, but it only accounts for 0.3% ~ 0.4% of GDP. The total investment is relatively small and the investment is seriously insufficient. Compared with Guangdong and Hunan, the gap is significant, and only about 80% of Yunnan Province is compared with Yunnan Province, which is the western province. While striving to improve the development platform and actively strive for national support, we need to establish and improve the investment and financing channels for the development of cultural industry. The contradiction between the large amount of capital investment and the insufficient and limited investment and financing channels is still the important bottleneck to restrict the development of cultural industry in Guangxi.

### 4. COUNTERMEASURES AND SUGGESTIONS ON THE DEVELOPMENT OF CULTURAL INDUSTRY COOPERATION IN GUANGXI

#### 4.1 Strengthen the sense of service

In order to give full play to the basic role of market mechanism in resource allocation, cultural authorities must take the road of legal economy, change from the administrative leader in the era of planned economy to the Policy Director under the condition of market economy, regulate the market by policy, promote the development by market, and provide market space and institutional guarantee for cultural industry. In terms of investment system, it is necessary to implement preferential tax policies for cultural industry investment in specific areas and industries in a certain period of time, so as to attract all kinds of capital to invest in cultural industry, so as to fundamentally change the operating environment of cultural industry. Strengthen the sense of service and create a good soft environment for government affairs. First of all, we should further emancipate our minds and renew our ideas. We should liberate from the traditional cultural development concept formed under the planned economic system, and establish a new cultural development concept suitable for the socialist market economic system. From focusing only on cultural undertakings to focusing on public welfare cultural undertakings and operating cultural industries on one hand; from one-sided emphasis on

ideological attributes of cultural products to emphasis on both ideological attributes and industrial attributes; from attaching importance to social benefits and neglecting economic benefits to focusing on social benefits and giving consideration to the unity of social benefits and economic benefits. We should strengthen the sense of service, further transform the functions of the government, and strengthen macro-control oriented to the society and administrative supervision according to law. We will further reform the administrative examination and approval system, reduce administrative examination and approval items, and enhance the transparency of administrative examination and approval.

Strengthen the sense of service, enhance the concept of policy and legal system, and constantly improve the ability of administration according to law. We should strengthen the construction of laws and regulations on cultural market competition and market supervision, and gradually establish a cultural market order featuring fair competition, good faith and compliance, smooth information flow, and healthy order, so as to create a good market environment. We should protect cultural intellectual property rights in accordance with the law, safeguard legal operation, severely crack down on all kinds of cultural infringement and illegal activities, comprehensively improve the level of cultural administrative departments in accordance with the law, and escort the sound development of the cultural industry.

#### 4.2 Actively cultivate market players

By introducing the market concept and changing the transformation mode of cultural resource elements, the growth of cultural industry in the cooperation region can be promoted to the track of benefit centered. On the basis of adapting to market demand, we should combine resource conversion with market orientation, so as to transfer resources from the field of excess supply to the field of insufficient supply, and from the field of low efficiency to the field of high efficiency. We should give full play to the advantages of cultural resources in the cooperation region, combine structural adjustment with the advantages of cultural resources, and attach great importance to the driving and promoting role of cultural consumption and cultural market in the development of cultural industry. Actively guide the cultural consumption level of urban residents, and constantly expand the cultural market demand. We should encourage and support all kinds of cultural enterprises and institutions to vigorously develop urban and rural cultural markets, gradually form an open, transparent and standardized market access system, and establish a unified, open, competitive and orderly cultural market system in accordance with the qualifications and service standards of market subjects.

Give full play to the basic role of the market in the

allocation of cultural resources, and actively cultivate market players. Taking enterprises as the main body, we should speed up the innovation of enterprise system and provide institutional basis and guarantee for the optimization of economic structure. On the one hand, we should pay close attention to the reform, reorganization and transformation of state-owned enterprises and establish a standardized modern enterprise system so that enterprises can truly become the main body of investment; on the other hand, we should support, encourage and guide the healthy development of private enterprises, especially small and medium-sized enterprises, so as to create an environment of equal competition for the development of all kinds of enterprises and cultivate a number of new enterprises on the basis of market competition.

#### 4.3 Cultivating innovative talents

Cultural industry is an industry with high intelligence and high technology. Therefore, the competition of cultural industry is also focused on the competition of innovation ability and talent. Talent is the basic competitiveness and creativity of the development of cultural industry, and human capital is the decisive factor for the future development of cultural industry. Therefore, in the construction of Guangxi cultural industry cooperation, we need to cultivate and attract excellent talents, improve the talent incentive mechanism, broaden the way of talent selection, and create an environment for outstanding talents to stand out. First, the development of cultural industry training base construction. We should encourage and support the research bases for innovation and development of cultural industry in the region and the cooperation circle, as well as comprehensive universities with conditions, to investigate and study major issues in the development of cultural industry, and to participate in the cultivation and training of cultural industry talents. According to the development requirements of the current cultural industry, we should set up majors such as cultural cause management, cultural market operation and management, cultural and art management, etc.

Conclusion: Based on the theories and methods of industrial economics, regional economics, regional planning and other disciplines, this paper analyzes the development of cultural industry in Guangxi. At the same time, according to the characteristics of Guangxi's economy, culture and resources, this paper explores the development mode of Guangxi's cultural industry. More importantly, this paper puts forward its own opinions on the regional development of Guangxi's cultural industry according to the economic strength and the development status of cultural industry in Guangxi.

#### ACKNOWLEDGEMENT

It is supported by High-level Talents Program of Guangxi Arts University ,“The Study of Cultural

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# Emotional Factors in Product Design

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**Abstract:** The continuous innovation of science and technology makes the functions of products more and more able to meet the needs of people's lives. Combining with the background of the new era, people's diversified spiritual needs, it is necessary to clarify a new design direction when designing products. That is to integrate emotional factors into product design, so that people's emotional needs are satisfied. This article is to analyze and discuss the related content of emotional factors in product design.

**Keywords:** product design; emotional factors; spiritual needs

## 1. INTRODUCTION

Industrial design is one of the important means to promote the country's economic development. At this stage, it has gradually entered a stage of rapid development[1]. In the future, there will be more possibilities waiting for future generations to discover and explore. In the context of the new era, combined with the specific conditions of social development, the abundance of the material world makes people's demand for the spiritual realm greater and greater. Reflected on the product design level, when designing a product, it not only needs to realize material practicability, but it also needs to incorporate

new thinking and new ideas into it to enhance the emotionality of product design.

## 2. THE CONNOTATION OF EMOTIONAL FACTORS IN PRODUCT DESIGN

Product design is basically the design of people. Design is to effectively guarantee the development coordination among people, things and the environment. In the product design process, users play a very important role in it. How to ensure the maximum benefit of the product is a problem that product designers should focus on in the design process. In the context of the rich material world, the functions in product design are gradually weakened, and users emphasize their spiritual satisfaction[2].

Therefore, the integration of emotional factors in the design process is more important than the integration of factors such as form and function. As a creative tool, emotional design can practice and express the designer's thoughts and ideas. It integrates emotional factors into product design. It can directly generate negative and positive emotions in the process of user application of the product influence. Therefore, it can be said that the morphological design is the design work carried out to ensure that there can be emotional resonance between the product and the user, which is mainly reflected in the three levels of the emotional system and the cognitive domain, as shown in Table 1:

Table 1 Three levels of emotion and cognitive system embodied in product design

Three levels of emotion and cognitive system embodied in product design	Instinctive level	As a basic level, it precedes thinking and consciousness, and is mainly based on the public's response to the appearance of the product. This level of design pays more attention to the first impression the product brings to users, and emphasizes the materiality of the product to highlight the user's sensory experience, which is mainly reflected in the material, color and shape in the design process.
	Behavioral level	The behavioral level is mainly related to the experience and application of the product. The user's behavioral level reaction is affected by factors such as the applicability and operability of the product. Whether users reach their goals in the process of product application and whether they are satisfied with the operating experience are all content that should be addressed at the behavioral level.
	Reflective level	The reflection level is equivalent to the above two levels, which are more advanced and exist in higher emotions, perceptions, and feelings. This level pays more attention to the integration between emotions and thoughts. For the product and the user, the negative level can determine the special meaning and happy memories of the user's application of the product.

## 3. SPECIFIC EMOTIONAL FACTORS IN PRODUCT DESIGN

Incorporating emotional factors into product design is a design creativity with high-level goal pursuit. This

kind of design creativity is mainly based on the function and form of the product, focusing on integrating the user's spiritual pursuit and high-quality life pursuit, guiding users to form a good

spiritual experience in the process of applying the product, and enhancing the cognition and understanding of the product[3]. On a comprehensive level, emotional design is based on the combination of the user's use and experience, to carry out the design of the corresponding product, and to bring users a happier and more efficient emotional pursuit. This kind of design concept is not for people's inherent thinking change, it is not to change people's behavior, but to respect people's behavior based on conventional thinking, to satisfy the demand of the people's specific people to meet the diversified demand, thus increasing the application of product comfort, enhance people's spiritual pleasure.

#### (1) Product material

As the material basis of the product composition, the material is mainly the emotional experience that the user obtains through the sense of touch in the specific application process. For example, teenagers and children like plush toys. One of the important reasons for their popularity is that the furry touch increases the added value and appearance of toys, as shown in the figure 1.



Figure 1 Plush toy design

#### (2) Product color

An inevitable link in the process of designing products is the link of color matching, and it is also an inevitable link in product emotional design. Colors can bring different emotional experiences to users, mainly by visually conveying different information to users, thereby affecting users' physical and psychological feelings[4]. Specifically, red represents danger or enthusiasm, which can make users feel excited and other aspects. At the same time, in the process of designing products, there are also color matching that need to be combined with the characteristics of the user and the specific characteristics of the product. If the product is used by men, it needs to pay attention to the use of bleak colors, women need to pay attention to the use of bright colors, and children need to use colorful colors, different color collocation can bring users different emotional experience, further produce different psychological comfort.

#### (3) Product form

The product form is mainly the shape and appearance

of the product, which belongs to the application of an objective factor. In the process of applying the product, the appearance of the product is the first thing that users produce, and the impact of the product also needs to survive in a specific real life in a specific form. In the context of modern life, products have practical functions, cultural functions, and aesthetic functions at the same time. With the help of different functions, they can effectively express the emotions of the product itself, so as to further enable users to obtain the same emotional resonance as the product at the spiritual level. Emotional products can make users generate positive emotions, thereby increasing users' desire to buy again. Therefore, for product designers, the corresponding design work should be carried out based on the consumer's experience and needs.

#### 4. REALIZE EMOTIONAL PRODUCT DESIGN STRATEGY

The emotional product design mentioned above includes three levels, the sensory level, the behavioral level and the reflective level. The sensory level is mainly the user's perception of the appearance of the product and the understanding of specific psychological needs, while the behavioral level is the ability to achieve specific standards on the basis of product functions. The reflective level is to connect ideas and personal emotions with the product.

##### (1) Enhance the fun of design

Carrying out interesting design work is not a characteristic design pattern of this era. This design was born in the handicraft period and even appeared at an earlier stage. Interesting product design is not a style, nor a fashion, but a way to express the designer's inner creative emotions and thoughts. Although life is changing more and more now, fun design can effectively comfort the lack of psychology and social psychology of contemporary people.

##### (2) Associative design

Many consumers often buy some products with their first feeling. Therefore, when consumers use their own subjective feelings to stimulate their own desire to buy, and stimulate the convenience, it shows that the designer's product design process is very reasonable to incorporate emotional factors. Therefore, in the specific design process, some designers can apply meditation, with the help of a product to associate with a variety of different scenes, so as to get some design feelings beyond reality. This process is the process of integrating emotional factors in product design.

##### (3) Symbolic design

Symbolic design is the analysis of the brand benefits corresponding to the product. The basic symbolic embodiment of technology can enhance the cultural connotation of the product. In the process of application and use of such products, we can have a deeper understanding of the symbolic meaning of the product, so that we can have a deeper understanding

of the original intention of the product design. Users can feel the information that fits the trend of the times in the process of applying such products, so as to clarify their status symbols and status symbols.

#### (4) Human touch design

Humanistic design is to use the different methods of designers to integrate some factors that load with the public feelings into the specific product design, so as to enhance the vitality of the product. With the help of different design concepts such as application function forms, users are guided to feel adequate care and care, thereby enhancing the affinity of the product.

#### 5. CONCLUSION

In summary, the integration of emotional factors into product design can well meet the emotional needs of the public, and the communication between people and things can be effectively realized. At the same time, it can enhance the emotional resonance between

the product and the public, and with the help of intuitive image display, it can meet the specific spiritual and psychological needs of consumers, conform to the development trend of the times, and promote the persistence of product design in the industry.

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# Thoughts and Suggestions on Solving the Problem of Compulsory Education for Migrant Children in Dongguan

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**Abstract:** As a special group in the process of China's transition from traditional agricultural society to modern industrial society, migrant children should enjoy the same rights as children in the cities they move in. However, there are some problems in compulsory education of migrant children in Dongguan and the situation is mainly manifested in three aspects. At last, this paper suggests some advice for solving those problems.

**Keywords:** Migrant children; Compulsory education; Dongguan

## INTRODUCTION

Since the 1980s, industrialization and urbanization have brought a large number of floating population to the economically developed urban areas. Dongguan, from an ordinary agricultural county to a world-famous manufacturing city, the influx of a large number of rural labor force contributed to. Along with earth-shaking changes in the economic structure, Dongguan's population structure has also been changing. According to the data of the seventh national population census of Dongguan, the permanent population of the city in 2020 is 10,466,625, and the floating population is 7,952,214. Children of migrant workers entering cities, also known as migrant children, are the reserve force for social and economic development like all other children, and they should equally enjoy urban public services, including compulsory education. However, due to the urban-rural dual structure and the household registration system and many other economic, political and social reasons, migrant children do not enjoy the same treatment as children in the cities where they enter, the most typical of which is compulsory education. How to solve this dilemma is also the focus of academic circles and government.

## 1. THE PRESENT SITUATION OF COMPULSORY EDUCATION OF MIGRANT CHILDREN IN DONGGUAN

With the increase of migrant workers in Dongguan, a large number of migrant children enter the city, and the education problems of these children need to be solved urgently. Generally speaking, the compulsory education of migrant children in Dongguan is mainly manifested in three aspects, namely "unable to go to

school", "unable to afford to go to school" and "non-standardized private education".

### 1.1 Unable to go to school

"Unable to go to school" means that the supply of education service as public goods in urban society is monopolized by the system, so that migrant children cannot enter educational institutions to receive education services. China's Floating Population Development Report 2013 shows that: Among 35.81 million migrant children, 39% of pre-school children are not enrolled in kindergartens, and 10.9% of migrant children aged 6-18 are absent from school, which is characterized by high absent rate of children from families with multiple children, high absent rate of inter-provincial migrant children, and high absent rate of children flowing into eastern regions. After more than a decade of efforts by governments at all levels and education departments, many migrant children are still unable to go to school. This shows that the problem of migrant children not being able to go to school has not been effectively solved.

### 1.2 Unable to afford to go to school

"Unable to afford to go to school" refers to the institutional alienation of education services as public goods in urban society and rent-seeking, resulting in migrant children families unable to afford education and its derivative costs. Simply speaking, "unable to go to school" refers to the problem of no public schools willing to accept migrant children in their destination areas. And unable to afford to go to school, refers to the public schools in the inflow area are willing to accept migrant children, but need the children's families to bear the corresponding costs, such as borrowing fees, sponsorship fees, etc. Generally speaking, families of migrant children belong to the bottom of the society, so they cannot afford the high borrowing fees and sponsorship fees. Data show that sponsorship fees for pre-school migrant children entering public kindergartens are common in all provinces across the country. In nearly 60% of provinces, more than 10% of pre-school migrant children entering public kindergartens need to pay sponsorship fees. For example, the proportion of sponsorship fee paid by Beijing is as high as 38.5%, that of Jiangsu is 20%, and that of Guangdong, Shanghai and Tianjin is over 13%. As a result, migrant children cannot afford to go to school.

### 1.3 Non-standardized private education

Non-standardized private education refers to private education is still to be perfected and consolidated. It is the twin forces of not being able to go to school and not being able to go to school that have driven the birth of a private education market. Compared with public schools, private schools have some problems in terms of teachers, teaching standards, safe environment, infrastructure, teaching management, etc. However, due to the flexible form of running schools, high identity among students and geographical characteristics, private schools not only provide compulsory education services for some urban migrant children to a certain extent, but also meet the income level and economic status of some urban migrant population, and meet the psychological needs of migrant children. But generally speaking, non-standardization is the main feature of such schools. Private schools are usually in an unstable state, with problems affecting the normal teaching order such as the relocation of school sites and the flow of teachers. In particular, private schools that have not been approved by the education authorities may even be banned or closed down, and students may lose school or transfer to another school at any time. This shows that, restricted by economic and social conditions, most of the private schools with migrant children as the source of students lack standardized management, which is the general consensus of the society.

## 2 POLICY SUGGESTIONS ON SOLVING THE PROBLEM OF COMPULSORY EDUCATION FOR MIGRANT CHILDREN IN DONGGUAN

### 2.1 Clarify the authority and expenditure responsibilities of government over compulsory education for migrant children

The authority and expenditure responsibility for compulsory education of migrant children should be transferred appropriately. To solve the problem of insufficient financial investment in the compulsory education of migrant children, it is necessary to clarify the powers and expenditure responsibilities of local governments at all levels, establish a compulsory education burden mechanism with clear powers and responsibilities, and truly implement the multi-subject funding burden mechanism. The nature of compulsory education for of migrant children should be fully recognized. The compulsory education of migrant children in the province belongs to the local public goods of the province, and the provincial government should be the main financial burden. Compulsory education for inter-provincial migrant children should be a national public good, with the central government as the main financial burden. Therefore, no matter which flow direction, the responsibility subject of compulsory education for migrant children should be moved upward from district and county governments, and the central government or provincial government should make

overall planning, increase its financial investment, and shoulder a greater proportion of the expenditure responsibility.

### 2.2 Strengthen the support of public finance to private education through government purchasing degree

Funds needed by the government to purchase degrees from private schools should be included in the compulsory education funding guarantee system. It should be made clear that no matter what kind of supply model is adopted, the basic characteristics of compulsory education, such as free, compulsory and public welfare, determine that the final subject of responsibility is still the government. The government should fundamentally ensure adequate resources for the compulsory education of migrant children, especially the investment of financial funds. Both from the perspective of legal system and theory, the government should bear the main cost of compulsory education for migrant children, including the purchase of degrees from private schools.

### 2.3 Carry out the points-based admission policy of public education resource for migrant children

In 2009, Dongguan took the lead in piloting the points-based admission policy. Points-based admission system, that is, the way to arrange the admission of migrant children according to the points ranking. From the trial to now, the points-based admission policy has been relatively mature, and has been warmly supported by the people of New Dongguan. Parents and children prepare the relevant information and materials required for admission according to the policy guidelines. Government departments also strictly check pass, carries on careful examination and verification to the material, accepts supervise of the society from all walks of life. Due to the limited educational resources and insufficient acceptance capacity of public schools, only 30% of migrant children are studying in public schools. Therefore, Dongguan has increased financial investment, strengthened the overall planning of public schools within the city, integrated the allocation of urban and rural compulsory education resources, made efforts to increase the degree supply of public schools, continuously expanded the scale of existing public schools, and expanded the acceptance capacity of public schools through various measures. Public schools have played a fundamental and guiding role in solving the problem of receiving compulsory education for migrant children.

## 3.CONCLUSION

Migrant children are a special group in the process of China's transition from traditional agricultural society to modern industrial society, which is a subgroup attached to the floating population mainly consists of farmers. In the process of social transformation, as the basic right of children's development, there are some problems in migrant children's education, which are represented by "unable to go to school",

"unable to afford to go to school" and non-standard private education. In this regard, many governance paths such as household registration path, financial path, educational equity path, educational policy path, as well as non-governmental funds, community path are designed and put forward. It is these problems that make the education governance of migrant children become a topic of common concern of the whole society, which has inspired many officials, researchers and enthusiasts from the government, academia and the civil society to explore and design governance paths, and also opened a new window for the reform of China's education system.

#### ACKNOWLEDGMENT

This research was funded by the general project in 2021 from Guangdong University of Science and Technology. Project name: Research on the

development of compulsory education for migrant children in Dongguan based on financial perspective. Project number: GK Y-2021KYYBW-22.

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# Research on Single Chip Microcomputer Course Construction Based on Innovation and Entrepreneurship Education

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**Abstract:** College Students' innovation and entrepreneurship education is an important part of college education, which is related to the cultivation of students' innovation and entrepreneurship ability. Therefore, colleges and universities should guide and cultivate students' innovation and entrepreneurship ability. Based on the background of innovation and entrepreneurship education and taking the single chip microcomputer course as the carrier, this paper points out that the concepts of practice and innovation can be integrated into the curriculum construction of single chip microcomputer specialty through innovation and entrepreneurship education, so as to stimulate students' learning interest and improve students' innovation and Entrepreneurship ability, as well as the engineering application ability and innovation and entrepreneurship ability of corresponding majors, So as to achieve the curriculum objectives of the course.

**Keywords:** single chip microcomputer; Innovation and entrepreneurship education; curriculum

## 1.BACKGROUND

The course "principle and application of single chip microcomputer" is a professional course for electrical majors. According to the professional talent training plan, combined with the post ability analysis and students' cognitive law, the goal of this course is to take the development of single chip microcomputer products as the main line, organically integrate the knowledge of single chip microcomputer internal structure, external interface, circuit design, program design and sensor detection technology through the design of diversified learning scenarios, so as to cultivate students' application design ability of single chip microcomputer, Enable students to master the basic methods of application and development of single chip microcomputer products, and be familiar with the whole process of hardware and software system design based on single chip microcomputer.

Innovation and entrepreneurship education is an important part of higher education, which is related to the quality of talent training and the development of students' career. Professor Lacker of Harvard University once said: if a person who dreams of success can make specific plans, have technology and creativity when starting a business, he is only close to

success. If young college students want to succeed in innovation and entrepreneurship, they should not only strive for government policy support, but also have entrepreneurial thinking. The shaping of entrepreneurial thinking of young college students should be the core content of innovation and entrepreneurship education in colleges and universities.

"Innovation and entrepreneurship training program for college students" is one of the specific projects to carry out the construction of "practical innovation ability training", that is, funds are jointly or separately distributed at the national, provincial and university levels to fund college students to carry out innovation and entrepreneurship training, aiming to enhance college students' innovation ability and entrepreneurship on the basis of innovation, Cultivate high-level innovative talents to meet the needs of the construction of an innovative country [1]. Through the implementation of the innovation and entrepreneurship training plan for college students, colleges and universities will be promoted to change their educational ideas, reform the talent training mode, strengthen the training of innovation and entrepreneurship ability, enhance the innovation ability and entrepreneurship ability of college students on the basis of innovation, and cultivate high-level innovative talents to meet the needs of the construction of an innovative country. Among them, the university level college student's innovation and entrepreneurship training program are a national college students' project application competition to further mobilize students' initiative, enthusiasm and creativity in carrying out innovation and entrepreneurship, advocate students' research and exploratory learning, independent scientific research and innovation, and deepen innovation and Entrepreneurship Education [2].

As an electrical professional course, it is observed that the relevant innovation training projects in the direction of single chip microcomputer account for a relatively high proportion [3-4]. Therefore, the construction of single chip microcomputer course based on innovation and entrepreneurship education is particularly important.

## 2.CURRENT TEACHING SITUATION OF SINGLE CHIP MICROCOMPUTER COURSE

1) Students lack of awareness of innovation and entrepreneurship. Under the guidance and promotion of modern science and technology, innovation has gradually become the core driving force of national development. Students have always received examination-oriented education, which leads to the lack of innovation and entrepreneurship awareness of college students. In the teaching of single chip microcomputer, we should face up to this problem and actively integrate and infiltrate the concept of innovation and entrepreneurship in the process of curriculum teaching.

2) The traditional teaching materials lack innovation and entrepreneurship elements. The traditional teaching materials mainly impart knowledge, but its innovation and engineering practice cannot meet the needs of market development. Moreover, we are application-oriented undergraduates. In the teaching process, we should not only impart certain theoretical knowledge, but also guide students' practical ability. Then the content of traditional teaching materials is deficient, and lags behind the needs of enterprises; Teaching materials emphasize theory and ignore practice, which is not conducive to cultivating students' ability to find and solve problems; The extension of the knowledge of teaching materials is not enough, lack of innovative education and expansion of industry development dynamics and market demand.

3) The teaching mode is relatively single. The traditional teaching mode is to teach theory first and then practice. The place of class is usually in teachers and training room. This teaching mode is not conducive to cultivating students' innovative thinking and entrepreneurship education. In addition, the assessment mechanism is not perfect. Teaching assessment is the core of school education evaluation and the evaluation of students' learning status and behavior changes. At present, teachers usually take students' academic achievement as the main standard, which is not conducive to the promotion and development of innovation and Entrepreneurship Education [5].

### 3. SINGLE CHIP MICROCOMPUTER COURSE CONSTRUCTION DIRECTION

1) Use "curriculum thought and politics" to implant the concept of innovation and entrepreneurship

Single chip microcomputer is a course that can reflect students' innovative spirit and consciousness and share innovative achievements. Change the previous practice of simple explanation. During the ideological and political time of the course, introduce the current development situation at home and abroad to students, such as outstanding figures in the field of single chip microcomputer, introduce their growth and entrepreneurial process, let students understand that technology can also be capital, encourage students to search the single chip microcomputer website on the Internet, join the single chip microcomputer forum,

and communicate with enthusiasts.

2) Break through the traditional teaching and implement the teaching method of online and offline combination

Traditional offline teaching, combined with online teaching forms such as micro class and Mu class, has realized the diversification of students' teaching methods. In theory teaching, excellent online resources are used for students' independent learning before and after class. Offline teaching with students hand-in-hand, learning theoretical knowledge and mastering corresponding skills through projects and starting from application. Let students use online resources to learn and consolidate basic knowledge at any time during the project. In teaching, online and offline teaching complement each other, which is conducive to optimizing teaching efficiency and improving students' learning efficiency.

3) Guided by market demand, reconstruct project-based task driven teaching

The content is career oriented, and enterprise projects are introduced into teaching (or taught by enterprise Engineers). The teaching content is composed of theory and skill training. With skill training as the main line, link the corresponding knowledge points, guide students to learn and do, let students complete relevant knowledge exploration and learning in practice and operation, and cultivate their innovation and entrepreneurship ability. During the implementation of the project, students acquire professional theoretical knowledge and design practice experience, master the design process and methods, improve the ability to solve problems, increase post experience, guide students from "learning" knowledge to "learning" knowledge, and carry out post rotation in the next task to ensure that students can have the opportunity to understand different post skills.

For example, the project "production of alarm in smart home" is introduced into the course, the course content is changed from single knowledge learning to task driven project course, and the teaching form is changed from class teaching to team cooperation and independent inquiry learning. So as to gradually improve students' ability to analyze and solve problems and their ability of teamwork and communication, which is also an innovation and entrepreneurship drill [6].

4). Strengthen practical and innovative training

Program design is not only the difficult part of learning MCU, but also the part that students are not willing to try for a long time. In teaching, the idea of modular programming is used to guide students through drawing flow chart and repeated programming and debugging. In this process, students have group discussions and consult a large number of materials in their spare time, so as to make the boring programming process less boring. Taking "task driven" as the main teaching method, the

project runs through the whole teaching process, introduces new knowledge with the project, and teachers guide and assist students to complete the project production and make evaluation. Through this process, students' practical ability is further strengthened and space for innovative thinking is given [7]. We should also innovate and reform the teaching content of single chip microcomputer. In the course teaching, the teaching content keeps pace with the times and adopts the combination of 51 series 8-bit MCU and STM32 series 32-bit MCU. At the same time, in terms of software, it is combined with industry programming standards and uses C language modular programming content for teaching.

Encourage students to participate in competitions, especially in professional disciplines. College Students' subject competition plays an important role in cultivating students' practical ability, innovative thinking and teamwork spirit. In the context of innovation and entrepreneurship education, the single chip microcomputer curriculum construction should always run through the relevant competitions. It mainly focuses on the application design of single chip microcomputer, mainly involving analog circuit, digital circuit, high-frequency circuit, sensor, programmable device and so on. Encouraging students to participate in the competition is conducive to the practical application of students' professional knowledge and the expansion of knowledge.

Strengthen the practical teaching content with the current production of enterprises in the way of going out. At present, an off campus practical teaching base has been established with Shenzhen balun Technology Co., Ltd. Create practical courses and gradually enrich and improve relevant courses.

#### 4.SUMMARY

MCU has the characteristics of low cost, strong universality and simple secondary development. It is widely used in intelligent household appliances, industrial control and other fields. It is a good training content in college students' innovation and entrepreneurship training plan. Single chip microcomputer course is a course with strong practicality and expansibility. After learning, students can create in many aspects, which is convenient for

the combination of theory and practice. According to the current situation of curriculum development and implementation, it is necessary to reconstruct and implement the single chip microcomputer curriculum and introduce methods and means such as innovation and entrepreneurship education to improve and innovate. Closely following the market demand and strengthening the cultivation of practical ability is conducive to keeping the curriculum close to the teaching objectives and the needs of the times. It is a favorable way to improve students' comprehensive quality and "entrepreneurship and innovation" ability.

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# Research on National Music Teaching under the Background of Multiculturalism

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**Abstract:** With the continuous improvement of people's material and cultural life and the development of globalization, countries around the world have become closer and closer in cultural exchanges, and Chinese national folk music has also been continuously developed. With the continuous development of multiculturalism, Chinese national music has been better inherited and developed, and national music teaching is no longer limited to local music teaching. More and more normal music majors begin to deeply study the significance of diversified integration of national music teaching. However, under the multicultural exchange, problems such as the impact of foreign culture on Chinese national music and the low interest of students in learning national music have gradually emerged, which has caused obstacles to the teaching and transmission of national music. In order to effectively carry out national music teaching, this paper mainly analyzes the significance of national music teaching and the challenges faced by national music in teaching and inheritance. This paper also puts forward the countermeasures for the development and inheritance of national music teaching under the multicultural background to provide some reference for national music teaching in the future.

**Keywords:** Multiculturalism; National music; Teaching research; Cultural inheritance

## 1. INTRODUCTION

In recent years, with the increasingly close exchanges between China and other countries in the world, Chinese traditional national music has also been impacted by foreign music culture. More and more young people advocate foreign music culture and ignore the charm of Chinese traditional music culture, which hinders the teaching and inheritance of Chinese national music. In addition, under the multicultural background, some music teachers ignore the importance of cultural integration and communication when implementing national music teaching. It is limited to the teaching of music culture, which is not conducive to cultural exchange and inheritance. In order to improve students' love for national music and make national music inherit, students and teachers majoring in music teaching in normal universities have the obligation and responsibility to develop and inherit national music culture under the diversified background [1].

## 2. SIGNIFICANCE OF DIVERSIFIED NATIONAL MUSIC TEACHING

China is a country with a large population and many nationalities. The forms of national music are diverse. Different ethnic groups have different national music styles, different expressions, and different musical instruments. The music of different nationalities expresses the living habits, lifestyle, demands for a better life, thoughts, feelings, and aesthetics of that nation. Through the development of national music teaching, students can learn the music culture between different nationalities, understand the development history and customs of a nation, improve their artistic cultivation and enrich their study and life. It is of great importance and significance to carry out national music teaching. By learning different national music, students can have a more solid musical foundation and have a deeper understanding of Chinese national cultural background and folk customs. In addition, the integration of Chinese national culture and foreign music culture can realize the beautiful situation of great unity of the people of the world, and it is also conducive to the inheritance and development of Chinese national music [2].

## 3. CHALLENGES FACED BY NATIONAL MUSIC IN TEACHING AND INHERITANCE

At present, with the continuous improvement of the national quality of our country and the continuous improvement of people's cultural literacy, our national music culture is in a prosperous stage, and the national music education and teaching in colleges and universities are becoming more mature and rich, and the methods in the development of national music teaching are more novel. However, it still faces various challenges in the teaching and inheritance of national music. First of all, national music has been impacted by foreign cultures. After the reform and opening up, our country has introduced many excellent foreign cultures, and has been influenced by Japan, South Korea, the West and other countries. Under the impact of foreign music culture, the status of music is affected, which is not conducive to the inheritance and development of national culture. In addition, students have a perfunctory attitude toward learning national music. Due to the large number of ethnic groups in China and the diversification of music expressions and content, many students find it difficult to learn national music. At the same time,

because popular music is less difficult and catchy, students have a perfunctory attitude towards national music learning and lack of attention. Furthermore, the national music curriculum is single and lacks diversity. Although there are many ethnic groups and diverse music cultures in our country, in the process of developing national music teaching, the design of teaching materials is relatively simple, and the introduction of more common and well-known national music is not conducive to students' learning and understanding of our country's national music culture [3].

#### 4. DEVELOPMENT AND INHERITANCE OF NATIONAL MUSIC TEACHING IN A MULTICULTURAL BACKGROUND

In the process of developing national music teaching, schools and teachers should adopt a tolerant attitude, actively introduce multiculturalism, follow the development of globalization, and carry out national music teaching under a multicultural background, so that national music teaching can be effectively inherited. Firstly, it is necessary to enrich the diversity of national music content. In the process of developing national music teaching, it is necessary to enrich the diversity of national music including vocal music teaching and folk musical instruments teaching, such as suona and cucurbits. At the same time, through the development of national cultural education, students' interest in learning is improved, so that students can have a deeper understanding of the traditional culture of different nationalities, and through cultural learning, they can better understand the thoughts, feelings and content expressed by national music [4]. Secondly, we should integrate Western music to promote local national music. In the process of developing national music, Western music should not be overly negated. In the process of developing national music teaching, according to the actual teaching situation, local national music is the mainstay and is combined with Western music or popular music. For example, in the process of teaching national musical instruments, Western musical instruments can be combined with national musical instruments to compose musical scores with national characteristics. Thirdly, the teaching materials of national music should be updated in time. In the process of developing national music teaching, we must keep pace with the times, use a developmental perspective to teach, enrich the content of teaching materials, introduce more representative and minority folk music, and realize diversified teaching. At last, original ecological elements should be added to the teaching of national music. Each nationality has its own national music characteristics. In the process of developing national music teaching, in combination with the multicultural

background and national style characteristics, the unique original ecological elements of the nation are added to the music teaching, so that students can better understand the culture of a nation. For example, music of The Bai People is often related to local ethnic festivals, such as Raosanling, Torch Festival, Shibaoshan Song Festival, etc.. By integrating the original ecological elements of different national festivals, it can better show the national music culture [5].

#### 5. CONCLUSION

It is of profound significance to carry out national music teaching under the multicultural background, which can promote and inherit Chinese national music. However, in the process of developing national music, national music teaching is hindered due to the impact of foreign culture, the spread of students' attitude towards learning national music, the single national music curriculum and the lack of diversity. In order to further improve the current situation of national music teaching, the methods of national music teaching under the multicultural background mainly include enriching the diversity of national music content, integrating Western music, promoting local national music, timely updating national music teaching materials, adding original ecological elements in national music teaching, etc., so as to further develop Chinese national music, so that Chinese excellent traditional culture can be inherited and developed.

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# Research on Controlling Shareholder's Equity Pledge and Accounting Conservatism

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**Abstract:** The pledge of stock rights of controlling shareholders has long been favored by financial institutions. It can carry out effective financing without affecting shareholders' rights to control, vote and make decision in the company. However, it will be affected by many factors in the actual application process, and a series of problems such as the decline of stock price and the transfer of control will occur, which is not conducive to the stable operation of the stock market. Therefore, this paper studies the pledge of stock rights and accounting conservatism of controlling shareholders, and summarizes the influence and countermeasures.

**Keywords:** Controlling shareholder; Pledge of stock rights; Accounting conservatism; Financial risk

## 1. INTRODUCTION

The so-called pledge of stock rights means that the controlling shareholder uses the company's equity held by him as collateral to apply for loans from banks and other financial institutions, or guarantee from third-party loan institutions. Pledge of stock rights is currently an important means of corporate financing. It will not affect the controlling shareholder's control, voting and decision-making powers over the enterprise. However, the capital market is affected by many factors, and the pledge of stock rights also face huge risks, such as the loss or transfer of control rights caused by the pledge of stock rights of controlling shareholders, and the obvious decline in corporate stock prices. When the situation is serious, the pledge of stock rights of controlling shareholders will directly cause the fluctuation of the whole stock market. Based on relevant studies, it is found that after the stock rights of controlling shareholders is pledged, in order to avoid significant fluctuations in the stock price and avoid the adverse situation of stock price collapse, the controlling shareholder often fabricates some good news, so that the enterprise's financial and accounting decisions are affected. It is extremely unfair to the company's creditors, and it directly causes their interests to be damaged, and causes conflicts of interest between the company's creditors and the controlling shareholder. Creditors, as the direct stakeholders of the company's interests, bear the huge risk of corporate bankruptcy. However, the company's growth income has little relevance to its interests. At this time, creditors and controlling

shareholders will have conflicts of interest. Accounting conservatism is a manifestation of maintaining the interest relationship between creditors and controlling shareholders. In order to avoid the impact of accounting conservatism caused by the pledge of stock rights of controlling shareholders, creditors often put forward the requirements for enterprises to adopt prudent accounting policies out of the awareness of risk prevention. The pledge of stock rights of controlling shareholders will cause changes in corporate accounting policies and make them more stable. But it will also be affected by creditors, financial risks and other related factors, and corresponding fluctuations will occur, which is also the main reason to carry out research on pledge of stock rights and accounting conservatism of controlling shareholders.

## 2. LITERATURE REVIEW AND RESEARCH HYPOTHESIS

### 2.1 Pledge of stock rights of controlling shareholders and accounting conservatism

Based on the perspective of controlling shareholders and creditors, this paper analyzes the impact of pledge of stock rights of controlling shareholders on accounting conservatism. For the controlling shareholders, when they pledge their equity, they may face the risk of control transfer caused by the decline of share price, which in turn will trigger the risk of control transfer caused by additional guarantees and forced liquidation. Therefore, the controlling shareholders will take a series of measures to reduce the falling risk of stock price so as to avoid the risk of additional guarantee or transfer of control. The existing literature has also confirmed this view from other perspectives. For example, the existing literature has found that after the controlling shareholders pledge their shares, the listed companies whose shares are pledged will disclose more good news and release news that the proportion of bonus shares or converted shares is large. And the listed companies are more inclined to capitalize research and development expenditure for upward earnings management and reduce the risk of control transfer through tax avoidance. Existing studies have proved that the management concealing or delaying the disclosure of "bad news" is one of the reasons for the rapid decline or collapse of stock prices in the short term.

Out of consideration of salary incentive and career,

the executives often have the motivation to hide "bad news". As the "bad news" accumulates within the company and breaks a certain threshold, it is ultimately released to the market in an instant, which will have a great negative impact on the stock price and cause a crash and is not conducive to protecting the interests of shareholders who pledge their shares. As an important governance mechanism, accounting conservatism makes "bad news" enter the capital market earlier, effectively alleviate the accumulation of "bad news", and then reduce the risk of stock price collapse. It is precisely because accounting conservatism can play the above governance role that the controlling shareholders will require the listed company to adopt more stable accounting policies after the pledge of stock rights to avoid the risk of share price collapse and control transfer.

In the relevant theoretical research on the causes of conservatism, the constraint of creditors is one of the important factors. As pointed out above, after the debt contract is signed, creditors bear the risk of failure to repay the principal and interest caused by the bankruptcy risk of the enterprise, but they can not enjoy the benefits brought by the growth of the enterprise. Therefore, creditors will require the enterprise to implement more stable accounting policies, and timely disclose "bad news" to protect their own interests. Many studies have proved that accounting conservatism can effectively alleviate and reduce the bankruptcy risk borne by creditors and prompt the default risk of enterprises in time. At the same time, creditors need to pay attention to the debtor's income and net assets, which will increase the signing cost and execution cost of the contract in the case of asymmetric information. The accounting conservatism can reduce the contract cost between the debtor and the creditor. In the research on the economic consequences of equity pledge, many literatures hold the idea that equity pledge has a negative impact on listed companies. Gao Lanfen found that the higher the equity pledge ratio of directors, supervisors and executives, the lower the earnings response coefficient, and the more serious the negative impact on the company's performance. Zheng Guojian and others found that it is easier for major shareholders to occupy funds of listed companies after equity pledge, which will further have a negative impact on the performance of listed companies. The above research shows that the "tunneling" caused by the equity pledge of controlling shareholders will lead to the decline of corporate value and performance. As it is expected that the pledge of stock rights of controlling shareholders may lead to the decline of the company's performance and value, relevant stakeholders will perceive such risks in advance and take countermeasures. For example, Zhai Shengbao found that auditors will increase audit investment, charge more audit fees and issue more non-standard

audit opinions after they perceive the possible risks caused by the pledge of stock rights of listed companies. Creditors, as important stakeholders of the enterprise, will require listed companies to adopt more robust accounting policies to avoid potential "technical default" and prevent financial risks after predicting the possible performance and value decline risk caused by the pledge of stock rights of controlling shareholders.

Based on the above analysis, when the stocks of listed companies are pledged, both controlling shareholders and creditors will influence the accounting policy choices of listed companies for their own interests and improve the accounting stability of listed companies.

## 2.2 Financial risk of equity pledge and financial risk of accounting conservatism

It is of great significance to the business activities of the enterprise. In reality, many well-known companies at home and abroad have fallen into financial difficulties because of ignoring financial risks, and they will inevitably go bankrupt in the end. In the existing research, Xiang Dewei pointed out that the financial risks of enterprises mainly include four aspects, namely financing risk, investment risk, capital recovery risk and profit distribution risk.

The high financial risk of an enterprise is by no means a good thing for creditors. Once the company becomes insolvent and declares bankruptcy, the debtor will not have enough funds to pay off the debt, which will harm the interests of the company's creditors. For instance, after Enron Corporation declared bankruptcy, its main creditors such as Deutsche Bank, Bank of China, JP Morgan and Citigroup all suffered huge losses. It can be seen that after the controlling shareholders pledged their equity, creditors will inevitably put forward higher robustness requirements for companies with high financial risks to protect their own interests. When the debt ratio and bankruptcy risk of an enterprise are high, the risk awareness of creditors will be enhanced, and creditors will be more motivated to restrict the behavior of enterprises and require enterprises to adopt more robust accounting policies to protect their own interests. Compared with companies with lower financial risks, listed companies with high financial risks have already reached a higher level of accounting conservatism under the constraints of creditors. Therefore, the effect of the pledge of stock rights of controlling shareholders on improving accounting conservatism will be reduced.

## 3. THE INFLUENCE OF PLEDGE OF STOCK RIGHTS OF CONTROLLING SHAREHOLDERS ON THE COMPANY'S ACCOUNTING CONSERVATISM

(1) There is a significant negative correlation between the pledge of stock rights of controlling shareholders and accounting conservatism, and the higher the proportion of pledge of stock rights, the lower the

level of accounting conservatism of listed companies. First of all, the equity pledge of the controlling shareholders implies to some extent that their financing capacity is limited, which is easy to be interpreted as a negative signal by the capital market and cause the decline of stock price. The controlling shareholders will face the risk of additional guarantee or even loss of control due to the decline of stock price. Therefore, they are likely to adopt more optimistic accounting policies to stabilize the stock price, and delay in the recognition of losses. In addition, for the controlling shareholders, the pledge of equity will lead to the restriction of their cash flow right, so their motivation to plunder the interests of minority shareholders will be strengthened. In order to camouflage themselves, they will also use their control rights to intervene in the disclosure of accounting information and hide bad news to avoid a decline in stock prices. What's more, equity pledge will also aggravate the financial risk of the enterprise and have a negative impact on the company's value. The executives themselves have the motivation to delay the confirmation of bad news to reduce the adverse impact of equity pledge on the enterprise.

(2) After considering the equity pledge of other major shareholders, it is found that among the samples with equity pledge of other major shareholders, the negative correlation between the equity pledge of controlling shareholders and the pledge proportion and accounting conservatism is stronger, while in the samples without equity pledge of other major shareholders, the negative correlation between them is not significant. It shows that if other major shareholders of listed companies also have equity pledge, they are also worried about additional guarantee and continuous position replenishment due to the decline of stock price. Therefore, they are more inclined to "collude" with the controlling shareholders to delay the recognition of losses, so as to stabilize the current stock price and reduce the accounting conservatism level of the company.

(3) After distinguishing the nature of property rights, it is found that equity pledge in China mostly occurs in non-state-owned enterprises. In the sample of non-state-owned enterprises, the negative correlation between equity pledge of controlling shareholders, pledge proportion and accounting conservatism is stronger. In the sample of state-owned enterprises, there is no significant negative correlation between them. It is mainly because China's restrictions on equity pledge of state-owned enterprises are more stringent, the supervision is more strict, and when the stock price falls to the "Forced stop line", non-state-owned enterprises will be directly forced to close their positions, while state-owned enterprises will not be forced to close their positions. Therefore, for state-owned enterprises, their motivation to stabilize the stock price is relatively weak. Moreover, state-owned enterprises have the protection of the

government, and they have many ways to resolve the risk of control transfer, small financing constraints, and less encroachment on the interests of listed companies, so their motivation to delay the confirmation of losses is weak.

(4) After considering the impact of marketization level, it is found that in areas with high marketization level, the loss of control by the controlling shareholder of an enterprise due to a pledge default has limited impact on the local economic development and social stability, so government intervention is relatively small. Moreover, the higher the marketization process, the more perfect the legal system construction and the more open and transparent judicial procedures are, which is more conducive to the protection of the interests of creditors, and the greater the risk of control transfer for controlling shareholders. Therefore, compared with areas with low marketization level, the negative correlation between equity pledge of controlling shareholders and accounting conservatism is stronger in areas with high marketization level.

#### 4. COUNTERMEASURES TO IMPROVE THE QUALITY OF INFORMATION DISCLOSURE

##### 4.1 To continuously improve the company's governance mechanism

For the company, on the one hand, it should continue to deepen the reform of the diversification of the shareholding structure, further diversify the existing shareholding structure, change the "single-word" phenomenon of the controlling shareholder in the company's decision-making, reduce the controlling shareholders' behavior of using their control right to encroach on the interests of minority shareholders after equity pledge, avoid the controlling shareholders' excessive intervention in the disclosure of accounting information, and truly give full play to the role of independent directors to earnestly safeguarding the interests of small and medium shareholders and investors. On the other hand, improving the incentive system for the executives through long-term measures such as improving business performance and strengthening the core competitiveness of the company to complete market value management, rather than through short-term measures such as earnings management and reducing accounting conservatism. The short-term measures can only temporarily conceal investors and will damage the confidence of investors and have a negative impact on the value of the company in the long run.

##### 4.2 To strengthen the supervision of equity pledges

For such pledge holders as banks, securities companies, and insurance companies, higher requirements should be put forward on the quality of information disclosure of the pledged company, the quality of the pledged goods should be evaluated in detail, and more objective and comprehensive quality evaluation standards should be formulated. And they

should focus on the risks arising from equity pledge loans, and strictly review the relevant pledge terms to prevent the controlling shareholders from cashing out through equity pledge. For the regulatory authorities of the government, on the one hand, the information disclosure system for equity pledges should be improved. For example, differentiated disclosure methods can be adopted. When the pledge ratio of controlling shareholders is higher than 50%, the listed company should disclose relevant information such as early warning line and closing line, so that external investors can fully grasp the equity pledge of the company, and controlling shareholders can not make additional guarantees or redemption of shares through profit plunder. On the other hand, the government should improve the relevant laws and regulations followed by state-owned enterprises and non-state-owned enterprises in equity pledge. In particular, the government should strengthen the supervision of non-state-owned enterprises' equity pledge to promote the sustainable and healthy development of the capital market.

#### 4.3 To improve the prudence of investors in investment decision-making

For external investors, they should focus on the equity pledge of the controlling shareholders, instead of blindly pursuing "good news". It is necessary to conduct a comprehensive assessment of personal financial situation of the controlling shareholders and business and development prospects of the listed companies to establish the concept of rational investment. Furthermore, they should also guard against controlling shareholders' behavior of market value management by reducing accounting conservatism, learn to dynamically adjust their investment strategies according to the actual situation of the company, maintain a cautious attitude in investment decisions, and effectively safeguard their own interests.

#### 5. CONCLUSION

Comprehensive related studies have found that the controlling shareholder will directly cause fluctuations in the accounting conservatism of the company when the equity pledge is carried out, which is mainly reflected in the positive correlation between the equity pledge and accounting conservatism and the positive correlation between the equity pledge ratio and accounting conservatism. In addition, factors such as ownership structure, property rights, and marketization levels will further affect the relationship between them. Therefore, in order to avoid risks at the company level, it is necessary to actively improve the company's system and strengthen the weighting of the company's equity pledge. For investors, it is necessary to make prudent decisions to ensure their own economic security.

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# Application of Psychological Resilience Education in Volume Control of Peritoneal Dialysis Patients

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**Abstract:** Objective: To observe the effect of psychological resilience education on volume control of peritoneal dialysis patients. Methods: 60 patients with peritoneal dialysis admitted to our hospital from April 2019 to March 2021 were selected as research samples, all of whom were given routine education combined with psychological resilience education by professional software. Results: After psychological resilience education, the blood pressure level, body mass and urine volume of patients were lower than those before education, with significant difference ( $P < 0.05$ ). Conclusion: Psychological resilience education in peritoneal dialysis population can better control their volume load and improve the clinical dialysis effect, which is worth popularizing.

**Keywords:** Peritoneal dialysis, volume control; Psychological resilience education; Effect observation

## INTRODUCTION

Most patients with end-stage renal disease need dialysis to remove toxins and excess water from their bodies. Maintenance peritoneal dialysis is the main alternative treatment for patients with end-stage renal disease in China, which can better protect residual renal function, prevent and control cross-infection, and is simple to operate. It is recorded that peritoneal dialysis patients in China account for about 20% of the total dialysis samples [1]. In the long-term clinical practice of peritoneal dialysis, the author found that many patients were admitted to hospital because of poor volume such as edema and hypertension, which reduced the dialysis efficiency and the quality of life of patients. Medical staff should actively explore a brand-new way of health education to effectively control the volume of peritoneal dialysis patients. Psychological resilience education can better excavate the excellent quality and external resources of individuals in difficult situations. The department where the author works tries to use it in peritoneal dialysis patients to observe its role in volume control.

## 1. DATA AND METHODS

### 1.1 General information

A total of 60 peritoneal dialysis patients (2019.4 ~ 2021.3) were selected, including 36 males and 24 females, ranging in age from 19 to 75 years, with an

average age of  $(44.58 \pm 10.20)$  years. Peritoneal dialysis time ranged from 6 to 32 months, with an average of  $(20.45 \pm 9.25)$  months. Educational background distribution: 6 cases in junior high school or below, 19 cases in senior high school or technical secondary school, 25 cases in junior college and 10 cases in undergraduate course or above. Inclusion criteria: ① All patients have definite diagnosis of their own diseases; ② Age  $\geq 18$  years old; ③ Peritoneal dialysis is performed regularly for more than 3 months; ④ The interval of outpatient follow-up was less than or equal to 6 months; ⑤ Clear mind, accurate response and voluntary cooperation to complete the research. Exclusion criteria: ① Complicated with severe cardiovascular and cerebrovascular diseases; ② Do not have normal language communication ability; ③ Hearing impairment; ④ Incomplete clinical data or quitting halfway.

### 1.2 Methods

Routine education includes publicizing disease-related knowledge, the necessity of peritoneal dialysis and related precautions. The contents of psychological resilience education include:

(1) Cultivate patients' positive and optimistic attitude: Patients undergoing peritoneal dialysis suffer from pain for a long time. What's more, with the decrease of their own income and the increase of treatment cost, they are prone to have many unhealthy psychological states such as inferiority complex and negativity. As a result, it would reduce their enthusiasm to participate in treatment activities, and negative emotions would easily stimulate various functions of the body. Most of the patients suffered from hypofunction and decreased immunity, which increased the incidence of complications such as infection and bleeding and reduced the quality of dialysis treatment. Therefore, medical staff should take the initiative to integrate the ideological connotation and development value of psychological resilience into clinical mental health education, attach importance to cultivating patients' positive and optimistic personality, and can replace the way of experience exchange, enumerate relatively successful cases of previous treatment for patients, and help them establish their ideological belief in conquering

diseases.

(2) Improvement of cognitive ability: After the patient is admitted to hospital, the medical staff take the initiative to carry out interview activities, which last for 20 ~ 30min each time and once a week. When the patient is treated outside the hospital, he can communicate by telephone follow-up and follow-up interview, which lasts for 12 weeks. First of all, establish a doctor-patient relationship of mutual trust with patients, ask patients questions with open questions, and actively understand their understanding of their own diseases and their behavioral problems during interviews. When patients are treated in outpatient service, they are interviewed one-on-one to guide patients to look at problems from different angles. Finally, family interviews, network electronic tools or telephone interviews were used for out-of-hospital treatment.

(3) Establish a diversified social support system: Patients will encounter different degrees of difficulties during dialysis treatment, such as discomfort such as pain, mobility inconvenience, emotional loneliness, etc. Family members, friends and colleagues should give them certain attention, assistance and care, such as sending a greeting from

Table 1 Comparison of body fluid clearance of sphygmomanometer in 60 patients before and after education

Period	SBP(mmHg)	SDP(mmHg)	Body mass (kg)	Ultrafiltration capacity (ml/d)	Urine volume (ml/d)
Pre-education	146.58±15.58	90.21±8.54	59.54±12.47	425.64±542.10	695.41±512.23
Post-education	130.21±10.28	81.24±9.07	54.11±10.23	562.35±512.36	571.23±520.29
t	4.214	4.512	4.021	6.214	7.012
P	<0.05	<0.05	<0.05	<0.01	<0.01

### 3 DISCUSSION

Psychological resilience is defined as an individual's good adaptability in the face of life adversity, trauma or other major life pressures, which can make the participants' "rebound ability" to life and setback pressures [12]. The proposal, development and deepening of the concept of psychological resilience can present the evolution process of the whole psychological research thought to a certain extent, which attaches importance to improving the negative quality of individuals and helping them form positive character step by step; Taking excavating the high-quality strength in human nature as the starting point, exploring the general law of psychological resilience, mastering the differences and plasticity of psychological resilience of different individuals, hoping to explore the individualized characteristics and external resources that promote the sustainable development of mental health of all mankind.

Peritoneal dialysis is a home dialysis method, which puts forward higher requirements for patients' compliance and self-discipline, especially the volume control directly affects dialysis effect and patients'

time to time, which may alleviate some of the pain of patients; Make patients see more hope in their lives in companion communication; Through the establishment of diversified social support system, patients' psychological problems can be better repaired and prevented.

#### 1.3 Observation indicators

Observe the body mass, blood pressure [systolic blood pressure (SBP), diastolic blood pressure (SDP)], 24-hour urine volume, ultrafiltration volume and other indicators before and after psychological resilience education.

#### 1.4 Statistical processing

Using SPSS22.0 software package to process data,

$(\bar{x} \pm s)$  is measurement data and  $t$  is test; The rate (%) represents the counting data. The test level is  $\alpha = 0.05$ .

## 2 RESULTS

After education, the blood pressure level of 60 patients was lower, and the body mass and urine volume were significantly reduced. Compared with those before education, the data difference was statistically significant ( $P < 0.05$ ). See Table 1.

quality of life. Previous studies have pointed out that during clinical peritoneal dialysis, under the action of dialysate perfusion and other factors, body fluids are redistributed in the body, 60% of dialyzers are in a state of volume overload, and long-term volume overload will increase the risk of cardiovascular events [3]. 60 dialysis patients included in this study were given psychological resilience education. After education, the blood pressure level of patients was lower, and the body mass and urine volume were significantly reduced. Compared with before education, the data were significantly different, which confirmed the effectiveness of psychological resilience education in volume control of peritoneal dialysis patients and was worth popularizing.

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# The Cultivation of Autonomous Learning Ability and College English Flipped Classroom Teaching Model Based on “Zone of Proximal Development” Theory

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**Abstract:** This paper explores the topic that college English flipped classroom teaching model based on “Zone of Proximal Development” theory can cultivate the students’ autonomous learning ability. The study covers introduction, autonomous learning, Zone of Proximal Development theory, flipped classroom, the cultivation of autonomous learning ability in flipped classroom teaching model based on “Zone of Proximal Development” theory and conclusion. The results prove that the teaching model can practically cultivate the students’ ability of autonomous learning, which embodies in stimulating the students’ inner learning motivation, playing the students’ subject status and improving the students’ learning ability.

**Keywords:** Autonomous Learning Ability; Flipped Classroom; Zone of Proximal Development ; Learning Motivation

## 1 INTRODUCTION

UNESCO put forward the educational concepts of "lifelong education" and "lifelong learning" respectively in its Fulton Report in 1992 and Delors Report in 1996. Then how to realize this educational concept, which requires that our education should pay more attention to the cultivation of social individual independent learning ability. The Outline of the National Plan for Medium - and long-term Education Reform and Development (2010-2020) clearly states: "we should pay attention to cultivating students' ability to study independently, to improve self-reliance ability to adapt to the society." Thus it can be seen that the cultivation of autonomous learning ability plays a positive and important role in the good development of college students.

## 2 AUTONOMOUS LEARNING

Autonom is derived from the Greek word, "autonomia" which means "autonomy, and freedom". Autonomous learning reflects the new trend of autonomous and cooperative inquiry development in education. Pintrich in Michigan University in USA believes that "autonomous learning is an active and constructive learning process. In this process, learners should first make clear the learning objectives, and

then monitor, regulate and dominate the cognition, motivation and behavior guided and constrained by the objectives and situational characteristics. [1] Autonomous learning theory includes constructivist learning theory, humanistic theory, lifelong learning theory and metacognitive theory.

## 3 ZONE OF PROXIMAL DEVELOPMENT THEORY

The theory of zone of Proximal development is the development view of children education put forward by vygotsky, the educationist of former Soviet Union. He believes that there are two levels of student development: one is the current level of students, which refers to the level of solving problems they can achieve in independent activities; the other is the student's possible level of development, that is, the potential gained through teaching. The difference between the two is the zone of proximal development. Teaching should focus on the area of students' proximal development, provide students with difficult content, mobilize students' enthusiasm, give play to their potential, surpass their zones of proximal development and reach the level of the next development stage, and then proceed to the development of the next proximal development zone on this basis. [2]

## 4 FLIPPED CLASSROOM

Flipped Classroom is a rearrangement of time in and out of the classroom, shifting the power of learning from teachers to students. In this model, valuable classroom time allows students to focus more on active project-based learning, working together to solve extended problems and gain a deeper understanding. Teachers no longer occupy class time to present information, which requires students to complete self-study before class. [3] They can watch video lectures, listen to podcasts, read e-books, and discuss with other students on the Internet. They can refer to materials at any time they need. Teachers also have more time to communicate with everyone. After class, students independently plan the learning content, learning rhythm, style and presentation of knowledge, while teachers adopt teaching and collaboration methods to meet the needs of students

and facilitate their personalized learning. The goal is to let students get more authentic learning through practice. Flipped classroom model is part of a larger education movement that overlaps with blended learning, inquisitive learning, and other teaching methods and tools to make learning more flexible, proactive, and engaged.

##### 5 THE CULTIVATION OF AUTONOMOUS LEARNING ABILITY IN FLIPPED CLASSROOM TEACHING MODEL BASED ON “ZONE OF PROXIMAL DEVELOPMENT” THEORY

The author has conducted a 16-week teaching model experiment of flipped classroom teaching model based on “Zone of Proximal Development” theory in two classes of college English. According to the data analysis of the experimental results, it has been concluded that the teaching model has improved the students' autonomous learning ability of translation. The specific performance is as follows:

###### 5.1 Stimulating the Students' Inner Learning Motivation

Psychology believes that learning motivation is an internal need to motivate and guide students to carry out learning independently, and it is a powerful internal motivation that can directly promote their independent learning. Therefore, an important premise and foundation for effective teaching in teaching practice is whether students have strong learning motivation. Learning motivation and learning are interdependent and dialectical, learning motivation can promote learning, and learning can react to learning motivation. [4] At the same time, the development of teaching activities is the dynamic development process of mutual interaction and collaborative learning between teachers and students and among students. Therefore, if students can take the initiative to actively participate in the teaching activities, not only can stimulate the teacher's teaching enthusiasm, but also the teacher's teaching enthusiasm can infect the students, so that the generation of efficient class will come naturally.

The research proves that the teaching practice of flipped classroom teaching model based on “Zone of Proximal Development” theory is beneficial to stimulate students' intrinsic learning motivation. In the teaching process, teachers' guidance, students' independent learning and cooperative exploration are adopted to cultivate students' strong thirst for knowledge, stimulate their interest in learning, and change “Ask me to learn” into “I want to learn”. Most of the students can take the initiative to devote themselves to teaching activities, know how to study and think independently, and know how to ask questions. It can be seen that the teaching mode of flipped classroom teaching model based on “Zone of Proximal Development” theory can not only greatly stimulate students' learning motivation, but also facilitate the change of students' learning attitude, and students will gradually develop good learning habits

and master some scientific learning methods.

###### 5.2 Playing the Students' Subject Status

The teaching model of college English flipped classroom based on “Zone of Proximal Development” theory has changed the traditional binary opposition between teachers and students. In teaching activities, the teacher is no longer the “center”, but the instructor, helper and promoter of students' learning. Through various ways, teachers fully mobilize the enthusiasm, initiative and creativity of students in translation learning, so as to enable students to participate in teaching activities to the maximum extent.

In the context of the flipped classroom, with the guidance and help of the teacher, students can study independently, think independently or cooperate with others to complete the translation task. The teacher only answers the questions and puzzles caused by the students in the independent learning, and helps the students to clarify their thinking and construct the knowledge framework. Therefore, in the whole learning process, due to the active learning of students, the “subject” status of students in learning has been truly played, so that students achieve the shift from “passive learning” to “active learning”.

###### 5.3 Improving the Students' Learning Ability

As the saying goes, “life is long and learning is endless”, so how to improve students' learning ability and make them learn to learn has become an important problem for our teachers to carry out teaching. From the perspective of the teaching practice of flipped classroom based on “Zone of Proximal Development” theory, it is not only helpful to the cultivation of students' autonomous learning ability, but also can greatly improve their learning ability.

To begin with, according to the “task list” issued by the teacher within the specified time, students watch micro videos, participate in online answer, discussion and other links to complete the set tasks, to achieve the transfer of knowledge. Secondly, the organization of discussion, and cooperative exploration. After the first step of self-independent learning of teaching materials, it is beneficial to enhance students' team spirit and sense of cooperation to cooperate with others through this step. Seminar members complete the application tasks of language knowledge assigned by teachers through independent inquiry or group cooperation. Then, with the guidance of the teacher in class, the students can use auxiliary tools to correct the assignment and introduce the thinking process and selection methods in learning, so as to solve the typical problems encountered in English learning. Finally, extend and test the feedback. The proper extension of English language knowledge is conducive to improving the breadth and depth of students' thinking. And the timely and effective test feedback is helpful for students to truly “apply what they have learned” and to timely evaluate and reflect on their learning.

## 6 CONCLUSION

To sum up, flipped classroom based on “Zone of Proximal Development” theory teaching model is very effective for college English teaching, and can practically cultivate the students’ ability of autonomous learning, which embodies in stimulating the students’ inner learning motivation, playing the students’ subject status and improving the students’ learning ability.

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# Using Big Data to Build Security Early Warning System for Public Sentiment in Colleges and Universities

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**Abstract:** The advent of the big data era has enriched the network life of college students, but it has brought greater challenges and difficulties to the public opinion work in colleges and universities at the same time. Therefore, colleges and universities should recognize the difficulties faced by the current public opinion work and actively use big data technology to carry out the security early warning of public opinion in colleges and universities. By promoting the professional development of big data network public opinion, establishing network public opinion early warning and prevention mechanism, and comprehensively monitoring public opinion in colleges and universities, a perfect security early warning system for public opinion in colleges and universities can be established.

**Keywords:** big data; public sentiment security in colleges and universities; early warning mechanism; construction strategy

## INTRODUCTION

After entering the network era, the dissemination of all kinds of information has had a great impact on the thoughts of college students. Especially with the use of intelligent devices, the channels for students to obtain information are becoming more and more diverse, and it is more and more difficult to control public opinion. If colleges and universities can not establish a good safety early warning system for public opinion, they can not control the value orientation of the school, which is easy to lead to the deviation of students' thoughts. Big data is also the product of the Internet age. Therefore, colleges and universities should actively use big data technology in the Internet age to monitor and warn the public opinion of colleges and universities, and correctly grasp the development direction of public opinion of colleges and universities.

## 2. PROBLEMS IN PUBLIC OPINION WORK IN COLLEGES AND UNIVERSITIES

There are many problems in the public opinion work in colleges and universities, mainly including the following different situations.

### 2.1 LACKING UNDERSTANDING OF PUBLIC OPINION SECURITY IN COLLEGES AND UNIVERSITIES

Public opinion in colleges and universities mainly refers to the comprehensive evaluation of events in colleges and universities by the society. These evaluations are likely to be mixed with some personal and subjective emotions and feelings. If it is not controlled, there is likely to be negative information, which makes it difficult to effectively control the spread of public opinion. [1] Therefore, colleges and universities should recognize the complexity of public opinion work. Adverse events in some colleges and universities, such as Zhai Tianlin's academic misconduct and the "student partners" of foreign students in Shandong University, fully highlight the problems existing in public opinion work in colleges and universities. The existence of these problems also reflects the neglect of public opinion work in colleges and universities from another angle.

### 2.2 LACKING PROFESSIONAL BIG DATA PLATFORM SUPPORT

After entering the Internet era, the ways of public opinion communication are very diverse, which leads to the analysis of different platforms when colleges and universities analyze public opinion. However, due to the lack of diversified public opinion data analysis methods in colleges and universities, there are many problems in their public opinion work. Specifically, it is mainly due to the lack of professional big data support platform, which leads to the lack of technology in public opinion monitoring, and the collection, analysis and early warning of public opinion data can not be guaranteed. This situation seriously restricts the development of public opinion work in colleges and universities.

### 2.3 LACKING PERFECT NETWORK PUBLIC OPINION PROCESSING MECHANISM

In recent years, public opinion events in colleges and universities have gradually increased, and the development speed of public opinion has also shown a rapid growth trend. According to relevant data, in 2017, the negative cases of public opinion in colleges and universities accounted for only about 20% of educational public opinion, but more than 50% in 2018. [2] This reality fully shows that the public opinion work in colleges and universities is facing great difficulties, and there is a lack of perfect processing mechanism. A lot of information related to

colleges and universities is quickly transformed into public opinion in colleges and universities. If colleges and universities can not deal with the content of public opinion in time, it will become a social hot topic.

#### 2.4 THE IDEOLOGICAL AND POLITICAL EDUCATION FUNCTION OF PUBLIC OPINION HAS LITTLE EFFECT

From the current situation of Chinese colleges and universities, it can be found that college teachers, students and related workers are relatively lack of relevant knowledge about public opinion, their own values and ideals and beliefs are not firm enough, and they are easy to be affected by bad information. This situation also shows that the public opinion work of colleges and universities can not play its own ideological and political education function. And colleges and universities have always ignored the guidance of dealing with public opinion events, resulting in teachers and students being at a loss when they encounter negative public opinion.

### 3. MEASURES OF USING BIG DATA TO BUILD PUBLIC OPINION SECURITY EARLY WARNING SYSTEM IN COLLEGES AND UNIVERSITIES

#### 3.1 TO PROMOTE THE PROFESSIONAL DEVELOPMENT OF BIG DATA NETWORK PUBLIC OPINION

In the process of promoting the professional development of big data network public opinion in colleges and universities, the following aspects need to be done.

First, college teachers and students should strengthen their awareness of big data. Relevant staff in colleges and universities need to have high big data literacy, and teachers also need to cultivate students' big data awareness when teaching, so as to ensure that the construction of the overall network public opinion system in colleges is strengthened. At the same time, colleges and universities should also improve their overall big data awareness. Only in the face of public opinion in colleges and universities can they give full play to the role of big data technology in information collection and information analysis. [3]

Secondly, colleges and universities should build a professional big data information platform. In the network age, the development of big data requires colleges and universities to use diversified methods when analyzing network public opinion data. Data collection and management is not only the unique work of the publicity department of colleges and universities, but also requires the joint participation of all departments. Only with the joint efforts of all departments can we form a perfect public opinion guidance mechanism and give full play to the role of network public opinion in the era of big data. At the same time, cloud computing and cloud services based on big data should also be actively applied to the big data information processing platform of colleges and universities to provide guarantee for the development

of public opinion work in colleges and universities.

Finally, in order to ensure the work efficiency of public opinion in colleges and universities, the school also needs to train professional big data talents to conduct big data analysis according to the actual situation of public opinion in colleges and universities. However, in terms of the current actual situation in China, colleges and universities can not cultivate a professional and systematic talent team with big data knowledge and technology in a short time. Therefore, colleges and universities should actively recruit from the society and carry out professional training for the current internal team of the school, so as to make up for the shortage of public opinion talents in the school.

#### 3.2 TO ESTABLISH A NETWORK PUBLIC OPINION EARLY WARNING AND PREVENTION MECHANISM

One of the most prominent characteristics of network public opinion in colleges and universities is its strong abruptness. If colleges and universities lack a perfect network public opinion early warning mechanism, it will lead to the failure to deal with public opinion in time, and eventually cause serious adverse effects. In the network age, students themselves are the main body of the network, so network public opinion can easily affect students' values. When establishing the network public opinion early warning mechanism, colleges and universities should form a combination of online and offline, so as to achieve better public opinion early warning effect. [4] Firstly, for any possible public opinion, universities can conduct in-depth analysis, find the possible source, and formulate certain preventive measures on this basis. Secondly, when the university network public opinion event occurs, the school public opinion managers need to make a comprehensive analysis of its nature and development, and finally formulate comprehensive measures to minimize the negative impact of network public opinion as much as possible. Thirdly, the school also needs to guide and respond positively to the existing network public opinion, so as to control the network public opinion within a controllable range. We can't directly block the information. We should disclose relevant authoritative information according to specific events and master the leading power of public opinion development, so as to truly control network public opinion fundamentally.

#### 3.3 TO CARRY OUT ALL-ROUND MONITORING OF PUBLIC OPINION IN COLLEGES AND UNIVERSITIES

The development of big data technology has laid a good technical condition for the development of public opinion work in colleges and universities. When colleges and universities use big data technology to carry out public opinion work, they must have an in-depth understanding of big data technology, so as to lay a good foundation for the

development of public opinion work in colleges and universities. And colleges should try to form a perfect processing network to ensure the normal and stable development of public opinion work. [5] The support of big data technology can ensure the comprehensive monitoring of network public opinion, so as to more comprehensively find the factors of public opinion outbreak, and then carry out targeted prevention and control measures. This is because the neglect of any inducing factor is likely to lead to the outbreak of public opinion in colleges and universities again. Therefore, big data technology is very important for the all-round monitoring of public opinion in colleges and universities.

#### 4. CONCLUSION

In short, big data technology has a deep impact on colleges and universities, and even affects many works such as early warning, prevention and control of public opinion in colleges and universities. Therefore, colleges and universities should recognize the importance of big data, apply it to the construction of the security early warning system of public opinion in colleges and universities, and actively guide the development of public opinion in

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colleges and universities in the right direction.

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# Research on the Supply-Side Reform Path of Application-Oriented Undergraduate Talent Training from the Perspective of the Shenzhen Bay Cross-Border e-Commerce Ecosystem

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**Abstract:** In recent years, cross-border e-commerce platform companies have driven the vigorous development of the cross-border e-commerce industry. From the perspective of the Shenzhen Bay cross-border e-commerce ecosystem, the sustained and strong development of the cross-border e-commerce industry requires sufficient high-quality compound application talents. Guided by the types and characteristics of talents needed for industry development, focus on the content, ideas and countermeasures of the supply-side reform of the training of cross-border e-commerce applied undergraduate talents. Strengthen the scientific guiding role of top-level policy design, and strengthen the dual subjectivity and leadership of school-enterprise cooperation training. Build a talent training pattern guided by the government and led by schools and enterprises. Provide strong human resources guarantee for the steady and sustainable development of the cross-border e-commerce industry.

**Keywords:** Shenzhen Bay; cross-border e-commerce ecosystem; application-oriented undergraduate talent training; supply-side reform

## 1 INTRODUCTION

In recent years, cross-border e-commerce has become a new growth engine for China's trade. According to the 2020 China Cross-border E-commerce Market Data Report by the E-Commerce Research Center, China's cross-border e-commerce market has reached 12.5 trillion yuan in 2020, a year-on-year increase of 19.04%. It is expected that the market size will reach 14.6 trillion yuan in 2021[1]. In the "City Ranking List of 13 Cross-border E-commerce Comprehensive Pilot Zones in China" released by the E-Commerce Research Center, Shenzhen ranked first with a score of 95.99[2]. Wang Xin, president of the Shenzhen Cross-border E-commerce Association, said in an interview that since 2013, the average annual growth rate of cross-border e-commerce in Shenzhen has reached 30%. Shenzhen's cross-border e-commerce transaction volume has been in the forefront of the country for many consecutive years[2]. Shenzhen

ranks firmly in the first echelon of China's cross-border e-commerce, and promotes the development of the industry, and the transaction volume of cross-border e-commerce continues to rise. Cross-border e-commerce is a complex project with multiple subjects, multiple technologies and multiple systems. To understand this new trade format in depth, it is necessary to understand the cross-border e-commerce industry from the perspective and height of the ecosystem. The cross-border e-commerce ecosystem refers to the business ecosystem composed of e-commerce platform enterprises, trade parties between different customs, service providers such as international logistics and payment and settlement enterprises, and supervision departments of customs and Inspection and Quarantine Bureau [3].

While the cross-border e-commerce industry is developing rapidly and creating new economic growth points, it is facing a huge gap in talent demand. It is urgent to discuss the supply-side reform of cross-border e-commerce application-oriented undergraduate talent training and provide strong human resources guarantee for the sustainable development of the cross-border e-commerce industry.

## 2 THE TYPES AND CHARACTERISTICS OF CROSS-BORDER E-COMMERCE TALENT DEMAND FROM THE PERSPECTIVE OF THE SHENZHEN BAY CROSS-BORDER E-COMMERCE ECOSYSTEM

### 2.1 Analyze the types and characteristics of talent needs from the division of labor across the cross-border e-commerce industry chain

The participants in the cross-border e-commerce industry chain mainly include four categories: cross-border traders, cross-border platform providers, cross-border service providers, and cross-border regulatory agencies.

#### 2.1.1 Cross-border traders

Refers to an enterprise that has its own brand, has the right to import and export goods, and conducts foreign trade transactions. For cross-border traders to seize the development opportunities brought about by the rise of global cross-border e-commerce,

cross-border trader talents must have these abilities including own brand building, intellectual property protection, overseas marketing and promotion, customer demand and experience management, etc.

#### 2.1.2 Cross-border platform providers

Cross-border platform providers occupy a dominant position in the cross-border e-commerce ecosystem and are the driving force behind the rise and rapid development of cross-border e-commerce. Cross-border platform providers provide trading platforms for both parties to trade, create a legal and healthy trading environment, and protect the legitimate rights and interests of all parties to cross-border e-commerce. Therefore, cross-border platform business talents must not only have cross-cultural communication skills, but also be proficient in cross-border e-commerce operations, rules, technology and laws.

#### 2.1.3 Cross-border service providers

Third-party service companies such as cross-border logistics, cross-border payment, and cross-border customs clearance are escorting the development of the cross-border e-commerce industry. Cross-border logistics talents must understand freight and logistics information technology to ensure the fast and safe delivery of goods; cross-border payment talents must have law-abiding awareness and the ability to ensure the safety and efficiency of customer funds.

#### 2.1.4 Cross-border regulatory agencies

In the development of the cross-border e-commerce industry, government agencies such as customs, inspection and quarantine, taxation, and foreign exchange administration play the roles of guide, servicer, manager and supervisor. With the vigorous development of cross-border e-commerce, regulatory loopholes and difficulties have gradually emerged. It is imperative to build a human resource database for the supervision and management of the cross-border e-commerce industry with government departments as the core.

### 2.2 Job analysis of cross-border e-commerce platform business talent needs

#### 2.2.1 Cross-border management talents

A. Forward-looking strategic thinking and management ability. Good at analyzing the characteristics and trends of the development of the industry, able to plan the overall cross-border e-commerce business of the enterprise, and good at mining and positioning the core competitiveness of the enterprise.

B. Keen logical thinking of cross-border e-commerce. Good at optimizing and innovating business relationships, business processes and customer experience, and creating value for different trading entities.

C. Comprehensive communication and coordination skills. Good at communicating, coordinating, and integrating internal and external resources of the enterprise, promoting the development of marketing

activities and category development.

D. Sensitive market perception ability. It is highly sensitive to changes in the international trade system, rules, import and export controls, and tariffs, and keeps up with cross-border e-commerce policies, and adjusts the business strategy of the company in a timely manner.

#### 2.2.2 Cross-border business talents

A. Forward-looking strategic thinking and management ability

Be good at analyzing the characteristics and trends of industry development, be able to plan the overall cross-border e-commerce business of the enterprise, and be good at mining and positioning the core competitiveness of the enterprise.

B. Keen logical thinking of cross-border e-commerce. Good at optimizing and innovating business relationships, business processes and customer experience, and creating value for different trading entities.

C. Comprehensive communication and coordination skills

Good at communicating, coordinating, and integrating internal and external resources of the enterprise, promoting the development of marketing activities and category development.

D. Sensitive market perception ability

Highly sensitive to changes in the international trading system, rules, import and export controls, tariffs, etc., closely follow the cross-border e-commerce policy, and adjust the company's business strategy in a timely manner.

#### 2.2.3 Cross-border technical talents

A. Core technical posts: including platform building and platform promotion talents. Cross-border e-commerce platform construction talents are mainly responsible for the development and maintenance of the main website, and they must be proficient in PHP programs; promotion talents are responsible for platform online shop decoration, and they must be proficient in platform rules and various skills such as SEO, SEM, Adwords operations, foreign media PR, SNS, Video Ad, and Picture Ad.

B. Basic technical posts: including art and photography talents. Be proficient in visual marketing and text layout, and take product pictures that conform to the platform's rules and aesthetics.

#### 2.2.4 Cross-border customer service talents

A. Strong communication and coordination skills

Be good at understanding the needs and concerns of customers in different regions and different cultural backgrounds, and properly handle customer inquiries, feedback and complaints.

B. Good customer service awareness

Good at maintaining customer relationships, with the ability to collect, organize and analyze data related to customer complaints, and improve customer satisfaction and loyalty.

C. Good cross-cultural communication skills

Proficient in English and other common languages, able to communicate with overseas customers without barriers.

### 3 THE STATUS AND PROBLEMS OF CROSS-BORDER E-COMMERCE TALENT TRAINING FROM THE PERSPECTIVE OF THE SHENZHEN BAY CROSS-BORDER E-COMMERCE ECOSYSTEM

In 2017, Shenzhen Zhongtaotong Network Information Co., Ltd. and Guangzhou Institute of Technology established a cross-border e-commerce school-enterprise cooperation incubation base; in 2018, Shenzhen Kimberly Cross-border E-commerce Group and Minjiang Teachers College reached a school-enterprise cooperation intention ; In 2020, Global Cross-Border Internet (Shenzhen) Co., Ltd. and Hebei Energy Vocational and Technical School signed a cross-border e-commerce professional strategic cooperation agreement.

At present, the main colleges and universities for cross-border e-commerce talent training are middle and higher vocational colleges, and the training mode is mainly school-enterprise cooperation. However, this school-enterprise cooperation model is still in its infancy stage. There are problems such as unclear training goals, unscientific curriculum system, weak professional teachers, lack of training practice links, and school-enterprise cooperation that is only a formality. It cannot satisfy the cross-border e-commerce industry. Talent demand under strong development.

### 4 THE CONNOTATION AND BASIC IDEAS OF THE SUPPLY-SIDE REFORM OF APPLIED UNDERGRADUATE TALENT TRAINING FROM THE PERSPECTIVE OF THE SHENZHEN BAY CROSS-BORDER E-COMMERCE ECOSYSTEM

#### 4.1 The connotation of the supply-side reform of cross-border e-commerce applied undergraduate talents

The essence of the supply-side reform of cross-border e-commerce applied undergraduate talents is to promote the healthy and sustainable development of the cross-border e-commerce industry, guided by the demand for talents for the development of the cross-border e-commerce industry from the perspective of the ecosystem, and enhance the scientific nature and the guiding role of the top-level policy design, and strengthen the dual subjectivity and leading role of school-enterprise cooperation training. Construct a government-guided, school-enterprise-led talent training pattern, explore new models, new ways, and new methods for talent training, so as to provide a strong human resource guarantee for the sustainable development of the cross-border e-commerce industry.

#### 4.2 The basic ideas of the supply-side reform of cross-border e-commerce applied undergraduate talents

##### 4.2.1 Optimizing the supply environment is the basic

condition

The cultivation of cross-border e-commerce applied undergraduate talents is a systematic project involving the organic collaboration of multiple core entities such as the government, enterprises, and universities. The government plays a guiding role to improve and implement policies and systems to ensure the role of personnel training.

##### 4.2.2 Clarifying the main body of supply is the fundamental guarantee

From the perspective of the cross-border e-commerce ecosystem, governments, enterprises, and universities should clarify their responsibilities and goals, share resources, and work together. Clarify the dual subjectivity of undergraduate universities and cross-border e-commerce companies in talent training, and solve the problem of "who will supply".

##### 4.2.3 Innovative supply mode is the key link

Both schools and enterprises must always maintain a sense of responsibility and innovation, and practice the concept of in-depth cooperation. With the development of the cross-border e-commerce industry, continuous reform and innovation of cross-border e-commerce talent training models and methods to solve the problem of "how to supply".

##### 4.2.4 Improving the quality of supply is the core demand

As the main force in the training of cross-border e-commerce talents, both schools and enterprises must understand the market and forecast the needs of the times, continuously optimize the talent training plan according to industry changes and changes in corporate talent needs, and continuously improve the quality of cross-border e-commerce talents cultivated.

### 5 COUNTERMEASURES FOR THE SUPPLY-SIDE REFORM OF APPLIED UNDERGRADUATE TALENT TRAINING FROM THE PERSPECTIVE OF THE SHENZHEN BAY CROSS-BORDER E-COMMERCE ECOSYSTEM.

#### 5.1 Adhere to the guidance of the government, and improve the system guarantee of "scientific planning, advanced training, incentive support, and innovation evaluation"

##### 5.1.1 Scientific planning

Relevant government departments should carry out research on the cross-border e-commerce industry, and formulate and issue a series of corresponding supporting policies such as the "Mid-term and Long-term Plan for the Construction of Cross-border E-commerce Talent System" in accordance with industry development trends and talent needs.

##### 5.1.2 Advance training

According to the "Mid-term and Long-term Plan for the Construction of Cross-border E-commerce Talent System", universities are urged to design a "six-in-one" facilitating talent training program based on the needs of corporate talents, vigorously innovate the school-enterprise training model, and cultivate cross-border e-commerce talents who can better

promote the development of the industry in accordance with the times.

### 5.1.3 Incentive support

Relevant government departments can formulate scientific and feasible incentive support policies. Appropriate financial support and enrollment policy support can be given to colleges and universities that have reached a certain scale of cross-border e-commerce professional enrollment and a certain percentage of employment; for colleges and universities that have innovative cross-border e-commerce talent training models and have achieved remarkable results in talent training, they can increase support intensity.

### 5.1.4 Innovation Evaluation

In response to the continuous innovation of cross-border e-commerce talent training models and methods, relevant government departments must continue to optimize and innovate the talent training evaluation system. In the evaluation indicators of training effectiveness, it is necessary to focus on designing scientific quantitative indicators and appropriately increasing the weight to enhance the monitorability of training effectiveness.

5.2 School-enterprise cooperation is in-depth, and the cooperation concept of "goal consultation, curriculum co-construction, teacher mutual assistance, order training, and benefit sharing" is practiced

#### 5.2.1 Discuss goals and design a "six-in-one" talent training program

Both schools and enterprises should design a six-in-one facilitating talent training program based on "theoretical teaching-demonstration and internship-simulation training-post training-competition to promote learning-innovation and entrepreneurship", and hold communication seminars every 1-2 years. According to the development trend of the industry, timely adjust and optimize the talent training goals and training standards to ensure the effect of cross-border e-commerce application-oriented undergraduate talent training.

#### 5.2.2 Co-construction of courses to build a scientific cross-border e-commerce professional course system

To build a scientific cross-border e-commerce professional curriculum system, it is necessary to give full play to the dual subjectivity of school-enterprise curriculum construction: First, the dual subjectivity of curriculum module design. Both schools and enterprises should focus on the training goals and standards, and jointly design core course modules such as cross-border e-commerce operations and management, cross-border e-commerce laws and regulations, and cross-border e-commerce marketing, and provide special professional qualities and corporate culture according to the needs of enterprises. Curriculum modules, as well as practical curriculum modules of "in-school simulation training + off-campus on-the-job training" mode; the second

is the dual subjectivity of undertaking teaching responsibilities. The core theoretical courses are mainly based on school teachers, and the special courses and practical courses invite corporate instructors to carry out practical teaching and practical training according to practical goals and tasks; the third is to carry out the dual subjectivity of teaching evaluation. Both schools and enterprises jointly formulate evaluation content, indicators and methods, and conduct assessment and evaluation of teaching effectiveness.

#### 5.2.3 Teachers help each other to create a well-structured professional teaching team

In addition to the continuous updating of theoretical knowledge and teaching methods, and the promotion of professional knowledge and professionalism for teachers in schools, colleges and universities must also vigorously introduce enterprise experts, allocate teachers inside and outside the school according to the teaching modules, and create a properly structured cross-border e-commerce professional teacher team: 1. It is to hire industry tutors, follow the principle of strengthening practical ability, and realize the organic connection between the curriculum system and the teaching team inside and outside the school according to the goals, tasks and requirements of different curriculum modules in the curriculum system; the second is to invite experienced business managers to communicate with teachers carrying out academic exchanges to help teachers update their practical knowledge of cross-border e-commerce, thereby improving teachers' teaching quality and teaching effectiveness; third, encouraging cross-border e-commerce teacher teams to enter the company to learn, use the winter and summer vacation time to practice and improve their quality.

#### 5.2.4 Order training to strengthen the practical ability of cross-border e-commerce talents

From the perspective of the cross-border e-commerce ecosystem, practical teaching is particularly important in the professional curriculum system. Carry out the order-based training of elite classes, title classes, order classes and incubation teams to strengthen the practical ability of cross-border e-commerce talents. Therefore, both schools and enterprises should jointly create on-campus + off-campus training bases to allow off-campus practice teaching to enter the enterprise, and strengthen practical capabilities through on-the-job training projects; jointly create a "cross-border e-commerce crowd-creation space" and build a cross-border e-commerce competition , Entrepreneurship platform, encourages and guides students to "promote learning with competition" and "innovation and entrepreneurship", and exercise students' practical ability in the context of competition links and the operation and management of cross-border e-commerce entities.

### 5.2.5 Benefit sharing and further deepen industry-university-research cooperation

In the school-enterprise cooperation, the enterprise can obtain employee reserves, intellectual support and think tank resources to support the development of the enterprise, perform corporate social responsibility, win social reputation, and obtain support and rewards from government policies. In the course of cooperation, colleges and universities can build a platform for horizontal topics, organize scientific research teams to obtain research results on horizontal topics, help companies solve business and technical problems, and promote the improvement of teaching standards. Eventually, a situation of mutual promotion of majors and industries, school-enterprise cooperation, and industry-university win-win situation will be formed, and industry-university-research cooperation will be further deepened.

### 6 CONCLUSION

From the perspective of the Shenzhen Bay cross-border e-commerce ecosystem, the task of training cross-border e-commerce applied undergraduate talents is heavy, difficult, and time-bound. The government needs to strengthen

guidance and improve system guarantees. It also requires deep integration and precise docking of school-enterprise cooperation. Constantly innovate new models, new ways and new methods of talent training.

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# Research of Experiential Preferences of Online Shopping Consumers in Different Lifestyles

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**Abstract:** Nowadays consumers requirements towards online shopping are seemingly higher than before. Subsequently the online shopping vendors are supposed to satisfy the consuming experience of shoppers that come from different kinds of levels in order to compete in this market. This study figured out the experiential strategy and designed elements that were preferred by the consumers from dissimilar lifestyle who surfed in different kind of online shopping websites. According to the results of this study, online consumers could be divided into three lifestyle groups: online shopping avoider, online shopping lovers and fearful online shoppers. Among the online specialty consumers, the online shopping avoider, the online shopping lovers and the fearful online shoppers paid attention on sensory experiences, affective experiences and relational experiences, respectively. Whereas, among the online shopping mall shoppers, online shopping avoider and online shopping lovers insisted on sensory experiences and interaction experiences respectively.

**Keywords:** Lifestyles      Experiential Marketing  
Online Shopping

## 1. INTRODUCTION

Nowadays, consumers highly rely on online shopping, and are gradually strict with the quality of it. In 2005, Taiwan Market Intelligence Center analyzes online shoppers in Taiwan, and also compares their satisfaction in 2001, 2004 and 2005. According the result of the questionnaire, these online shoppers can be grouped into four categories, which are "very satisfied", "rather satisfied", "average" and "dissatisfied". As to the proportion of "very satisfied" group, the momentum decreases from 79% to 60% during the 2001-2005 period. The proportion of "average" group goes up from 5% to 35.5%. That is because the competition between online shops is more and more drastic, and information explosion can always distract consumers' attention. Moreover, consumers expect to obtain deeper satisfaction. Unfortunately, many of the online store operators or designers only pay attention on the functional attributes of products, neglect the importance of experience. In the age of information explosion it seems difficult to attract consumer attention. As Zaitman stated in 1997 at Procter & Gamble's Future Forces Conference in Cincinnati, Ohio, "Consumer

preference and motivation are far less influenced by the functional attributes of products and services than the subconscious sensory and emotional elements derived by the total experience."

Therefore, director of Yahoo! Value Lab, Tim Sanders suggests that "experience" is the basis of a new economy. The commercial websites are requisite to provide an unforgettable and amazing experience in order to prove their worthiness. Furthermore, Zarem(2000) addresses that creating experience is the new battle ground because people today are motivated by experience. Besides, based on the idea "the more you know and understand about consumers, the more effectively you can communicate and market to them" (Plummer, 1974), the study of people's values and lifestyles has become a standard tool for both social scientists and marketers around the world. Bellman, Lohse & Johnson(1999) pointed out that the most important information for predicting shopping habits—online and offline—are measures of consumer lifestyles, not demographics. In other words, to effectively conduct a shopping website, we should be acquainted with the consumer lifestyles and characters.

Hence, this research is based on Schmitt's (1999/2003) SEMs, Strategic Experiential Modules and Lifestyles Theory. By using the quantitative method, this study figured out the experiential strategy and designed elements that were preferred by the consumers from dissimilar lifestyle who surfed in different kind of online shopping websites. Consequently, these results will probably provide the website designers an immediate and accurate direction, practically.

## 2. LITERATURE REVIEW

### 2.1 Experiential Marketing and Strategic Experiential Modules

Experiential Marketing is distinct from conventional market, which is emphasizing product features and benefits, and considering consumer rational. Experiential Marketing centers on customer experience, it provides consumer sensory, affective cognitive, interaction, relational function to replace the value of function. (Schmitt 1999, 2003)

As Schmitt (1999, 2003) mentioned in his Experiential Marketing, He takes experiential forms as Strategic Experiential Modules, SEMs. Strategic Experiential Modules includes Sense, Feel, Think,

Act (interaction) and Related, which are strategic foundations of Experiential Market. Every Strategic Experiential Modules are provided with distinct structure and marketing principle, for example, the strategy of Sense, Feel, and Think provides consumer stimulation consciousness, generating their emotional connection to the company, and then encourage team to more complex thinking. Otherwise, the strategy of Interaction and Related is to design and create customer's experience related to body, action modules and lifestyle, this strategy makes consumer produce action activity with experience, and offer them some communication relation experience, like console, assistance, value, etc. Now the following are the brief accounts of these five experience forms:

**Sense :** Stimulates as many of the five senses or modalities as possible virtually through sight/vision (visual), sound (aural or auditory), touch (tactile or haptic), smell (olfactory), and taste (gustatory), providing customer aesthetic pleasure and excitement. (Schmitt 1999, 2003).

**Feel:** Emphasize the store and purchase atmosphere, try to stresses the emotional component of shopping (Schmitt 1999, 2003). This includes how a web site places users in a certain mood, makes them respond in an emotional fashion, and appeals to their feelings (Schmitt 1999, 2003).

**Think:** Engages users in creative and problem-solving ways and impacts their thinking (Schmitt 1999, 2003). These experiences include how a web site or shop intrigues users, stimulates their curiosity, and appeals to their creative cognition (Schmitt 1999, 2003).

**Act(Interaction):** Provide creative associations as well as lifestyle marketing. Through increasing sensory experience and opportunities of interact others, It affects customer's action, lifestyle and enrich user's life. (Schmitt 1999, 2003).

**Relate :** Allow individual make connection with ideal-self, others and social culture, meanwhile, establish the sense of identity and belonging. (Schmitt 1999, 2003).

These experience form varies according to the degree of customer's engaging and immersion. The seller must apply these forms sophisticatedly to maximize the whole effect of experiential marketing. (Schmitt 1999, 2003).

## 2.2 Internet Lifestyles

There is a lot amount of researches about internet shopping based on the approaches of socio-economic, and demographic, etc. However, in the flourishing of internet shopping nowadays, socio-economic, demographic is not the best approach and indication to developing Internet shopping market. That is because one's above-the-line and below-the-line personality would be different, we must realize consumer's profile through their lifestyle on the web, and then we can make the correct marketing decision. Therefore, to respond the flourishing of internet,

some researchers propose the ideas about Internet-related psychographic or Internet shopper lifestyle, they consider that demographic and socio-economic descriptors have been neither the most effective in developing segments (Wedel and Kamakura, 2000) nor a good predictor of the propensity to buy on-line (Vellido, 2000). For example: what the past researches believe seems more closely related to actual online purchase behavior. Those who actually purchase online appear to have been using the Internet for a longer time (Dahlén, 1999; Novak, Hoffman and Yung, 2000), to be more frequent web users (Hoffman, Kalsbeek and Novak, 1996) and to spend more time on the Internet (Rangaswamy and Gupta 1999). The research of Swinyard & Smith (2003) uses the dimension of internet user's lifestyle of shopping, and they took US online household as research object, they analyzed the reason why their research object are internet shopper or non-shopper, and their difference in internet and shopping behavior. Their research attempted to arrange a lifestyle profile of internet shopper/non-shopper and provide a strategy of online store design according to different shopping group. This questionnaire was mailed to a probability sample of 4000 US online households, of which 1738 (43.5 percent) replied and e-mailed to 20,000 e-mail addresses, of which 2477 (12.4 percent). The instrument contains 38 Internet shopping psychographic statements (Internet shopper lifestyle scale), 14 measures of Internet behavior, and 13 themes of Internet usage. As the result shows, Internet shoppers were divided into four segments: shopping lovers (11.1 percent), Internet explorers (8.9 percent), suspicious learners (9.6 percent), and business users (12.4 percent). Internet non-shoppers were similarly identified as: fearful browsers (10.7 percent), shopping avoiders (15.6 percent), technology muddlers (13.6 percent), and fun seekers (12.1 percent).

**Shopping Lovers (11.1%) :** Their age are general younger, frequently buy online and really enjoy doing so. To them, Internet shopping is a new and activity of fun.

**Adventuresome Explorers(8.9%) :** This kind of user are varied in their internet behavior, and it is most obvious in shopping behavior, they would seek other advise on internet, preview the product, search for lowest price in everything they buy before they shop on line, and they prefer that their order could be send to them directly.

**Suspicious Learners (9.6%) :** They are just learning how to use the Internet. They are frustrated by it, struggling to complete tasks found easy by others. To become a significant on-line shopper group, this segment needs direction and hands-on guidance.

**Business Users (12.4%) :** They mainly use the Internet for business purposes and look at the Internet in terms of what it can do for their professional life.

But they don't often make personal online purchases. Fearful Browsers(10.7%): They are very computer literate and often practice "Internet-window-shopping." However, being afraid of their credit-card number stolen, shipping charges, and wishing they could see products in person before they buy, they less shop on internet.

Shopping Avoider(15.6%): Shopper in this group prefer experience the pleasure of shopping personally, they hate online shopping and do not understand its procedure, so they are very difficult to turn into online shoppers.

Technology Muddlers(19.6%): They have lower computer literacy, and they have a little excitement about increasing their computer and on-line comfort level.

Fun Seekers (12.1%): Members of this segment look to the Internet for its entertainment value. But because of their consideration to the safety of internet shopping and privacy, and their lower economic foundation, they do not shop on line.

Furthermore Brengman, Geuens, Weijters, Smith, & Swinyard(2003) replicate the study of Swinyard & Smith (2003) in Belgium, to test the Internet shopper lifestyle scale validity and evaluate the similarity and difference of online shopper/nonshopper in Belgium and America. However, considering national and cultural condition of Belgium and its difference between America, the researcher revised Swinyard & Smith's (2003) questionnaire and used online e-mail survey, they e-mail 20000 to e-mail user, and of which 11% replied. According to the result of research, there is not major difference in the classification of online shopper in Belgium and in America.

Therefore issue of cross-cultural is an influential factor of the definition of consumer's lifestyle in specific region, and also of the design strategy of relative experience. The articles researching shopping style of internet user is very rare in Taiwan to help designer for creating electronic commercial website, the internet user shopping style is what we try to analyze in this article, furthermore, we use Swinyard & Smith's approach (2003), emphasizing the behavior of internet use, shopping and preference of user. We refer Swinyard & Smith (2003) to design our questionnaire. The research questions are: 1. What is the distinction and characteristic of internet shopper's lifestyle in Taiwan? 2. What are the experience forms (sensory experiences, affective experiences, cognitive experiences, interaction experiences and relational experiences) adopted by consumer with different lifestyle when they shop on online specialty shop and online shopping mall?

### 3.RESULTS

#### 3.1 Internet Lifestyles

Online shopping avoider: They prefer real store and personal experience of shopping, among the three

groups. They like the atmosphere and pleasure of shopping in real store, enjoy the service there, they consider the service system of real stores is better the online ones, therefore, they do not identify on line shopping, neither agree online shopping as a joyful experience. They seldom shop online.

Online shopping lovers: This group, which prefers to shop online most, is mainly composed by students. Their amount on times and money spending on internet shopping is more than the other researching groups (most of them spend NT10000 to NT50000 on internet shopping). Concerning user in this group, online shopping is a very interesting way for shopping. They like browsing all kinds of merchandises on the web, searching a lower price; they consider online shopping is quite enjoyable and convenient.

Fearful online shoppers: Users in this group are mostly in the age bracket from 26 to 30, and the majorities are working people. They would search on the web, and also consider internet shopping as a new and interesting way of shopping, but they have misgiving about the delivery and merchandise-returning system of online shopping,

#### 3.2 Experiential Preferences

In our research, we found that it is different experience for each group shopping in different shopping website.

Online shopping avoider: As for online shopping avoider, no matter rather are in online specialty shop or online shopping mall, they care sensory experiences most. They experience the aura through music, smell, decoration of the actual store; seeing the actual goods, they can even try on when they are choose clothes. It is a pleasure for them to shop at an actual store, it is about sense perception, which can not completely be experienced on the web.

Online shopping lovers: in the online specialty shop, the online shopping lovers mind affective experiences most, they like a website which can offer the feeling of free, comfortable, satisfaction and thoughtful, Norman (2004) believes that emotion is influential in the process of data processing, even change the module. Other psychologists also confirms that the emotional transfer influence attitude, memory and decision of action, conspicuously, when a website could offer the user a enjoyable searching experience, user's trustfulness, loyalty, and satisfaction to the website will raise. Therefore, in the approach to marketing, online specialty shop manager should set up a free, satisfying and thoughtful experience for their web store.

Fearful online shoppers: fearful online shoppers care most about relational experience when shopping on online specialty; it is concerning their misgiving about the safety of online shopping. According to the research of Yen, Yung-shen (2000), consumer with a lower credibility is more sensitive to professional qualification of website. we suggest the designer of

online specialty shop to offer more relational experiences design issues, such as, sharing the reflections of shopping, information of buyer's appraisal, establishing a higher brand values of the website, etc, in order to built user's identity to the website and connection to the other.

#### 4.CONCLUDING DISCUSSION

According to the result, user with different lifestyle, attach their importance on different experience, when shopping on different internet shop, therefore, the website manager could design diversified experience situation in terms of distinct user lifestyle, as we analyze and classify in this article.

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# An Analysis of the Status Quo and Needs of Urban Autistic Children's Families: Taking Zhejiang Province as an Example

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**Abstract:** [Objective] This study conducted an in-depth analysis of the status quo and needs of Urban families of autistic children in Zhejiang Province through surveys and interviews. [Methods] Through questionnaire surveys and semi-structured interviews, 67 valid questionnaires were collected and 12 parents of children with autism were interviewed. [Results] In terms of the selection of rehabilitation methods, daily care, information channels, social acceptance, and integrated education, families of children with autism in urban areas are facing difficulties of all sizes. [Conclusion] The implementation of effective countermeasures is imminent, and community service support and emotional support should be increased.

**Keywords:** Urban autistic children; family needs; status quo of social support

## 1. RESEARCH BACKGROUND

Autism, also known as autistic disorder or autism spectrum disorder, is a representative disease of pervasive developmental disorder, mainly manifested in social interaction and behavior disorder (DSM-5, 2013).

Relevant scholars have done a lot of investigation and research on the families of children with autism. The main results of the research are as follows: (1) Facing difficulties, families of children with autism generally suffer from financial difficulties, psychological stress and even mental illnesses [1-4]; (2) In terms of rehabilitation resources, rehabilitation resources are in short supply, assistance services are significantly less developed, rehabilitation institutions are scarce, and teachers are in short supply. (3) In the implementation of countermeasures, although a policy on rehabilitation and assistance for children with autism has been released, the policy is not popularized and the coverage is incomplete [5], and the effect of policy implementation is relatively poor. In summary, existing studies have provided certain theoretical support and suggestions for the development of families with autistic children in the later stages. However, the current situation and needs of families with autistic children in urban areas are not well illustrated, especially in terms of social support. This research, through questionnaires and

interviews, has carried out in-depth discussion and analysis of the current situation and needs of urban autistic children's families from the six aspects -- economy, daily care, diagnosis and treatment, educational needs, social acceptance, and rehabilitation technical support, and propose corresponding countermeasures and guidance.

## 2. RESEARCH SUBJECT AND METHOD

### 2.1 Research subject

The current situation and needs of 67 autistic children in Zhejiang Province are taken as the research subject.

**Inclusion criteria:** The children were diagnosed as children with autism spectrum disorder by the hospital, and their parents had informed consent and were willing to participate in this study.

The research team visited seven cities including Hangzhou, Wenzhou, Shaoxing, Jiaying, Jinhua, Lishui, and Quzhou in Zhejiang Province, focusing on 67 families with autistic children in 6 institutions and schools, including Yueqing Xunyou Children's Development Center, the Shaoxing Rehabilitation Center, Jiangshan Disabled Persons' Federation of Zhejiang Province, Jiaying Special Education School, Zhejiang Early Childhood Intervention Center, and Zhejiang Pinghu Aiyi Talent Cultivation Center.

### 2.2 Research methods

**2.2.1 Questionnaire survey method:** The questionnaire is divided into three parts: basic information of children with autism and their families, family needs of children with autism, and the status quo of social support. Due to the particularity of the research subjects, the research team issued 72 questionnaires, recovered 72 questionnaires, and recovered 67 valid questionnaires. The recovery rate was 100% and the effective rate was 93.1%.

**2.2.2 The semi-structured interview method:** using random sampling methods to conduct in-depth interviews and exploratory interviews. A total of 12 parents of children with autism were interviewed. The content of the interviews included the rehabilitation of children with autism, family needs, status of social support, and understanding and understanding of autism. In addition, field investigations on rehabilitation institutions, autistic children rehabilitation centers, disabled persons'

federations, and special education schools are carried out ,aiming at supplementing the deficiencies and deficiencies of the questionnaire survey and making this research more rigorous.

### 3. RESEARCH RESULT

Table 1 Family status and diagnosis and treatment of children with autism (n=67)

variable		percentage	frequenc
family monthly income	< 3500 Yuan	11.94	8
	3500-7000 Yuan	29.85	20
	7000 yuan-13000 Yuan	32.84	22
	> 13000 Yuan	25.37	17
The main source of children's rehabilitation expenses	Family income	88.06	59
	Government support	10.45	7
	Social financing	1.49	1
Rehabilitation treatment costs account for family expenditure	0%	7.46	5
	0%-30% (excluding	50.75	34
	30%-60% (excluding	29.85	20
	60%-90%(including	11.94	8
Daily care of children	Grandparents	23.88	16
	parents	62.69	42
	Babysitter	2.99	2
	Training school	4.48	3
	Other guardians	5.97	4
Time when the child was found to have developmental disabilities	Before the child was	0	0
	0-2 years old	43.28	29
	2-3 years old	49.25	33
	4-6 years old	7.46	5
	After 6 years of age	0	0
reasons for non-treatment or children's failure to receive treatment after	stressful economic	45.45	31
	Slim chance of cure	27.27	18
	Failure to find formal	18.18	12
	Children's	9.09	6
The main way to obtain child treatment information and policies	network	38.81	26
	Rehabilitation center	65.67	44
	hospital	14.93	10
	Relatives and friends	16.42	11
	Disabled Persons' Federation and other government agencies	17.91	12

Economically, as shown in Table 1, the monthly income of urban families with autistic children is concentrated between 7000-13000 yuan; in terms of the sources of rehabilitation expenses for children, more than 88% of the rehabilitation expenses come from family income, government support and social Funding is seriously inadequate; rehabilitation and treatment costs account for about half of households with 0%-30% of household expenditures.

In terms of daily care, more than 80% of children with autism are taken care of by their fathers, grandparents, or grandparents, and only less than

10% of children with autism are taken care of by nanny and other guardians or nurseries.

In terms of diagnosis and treatment, more than 90% of families learn about the child's possible developmental problems before the child is 3 years old, and the proportion of the child who understands the condition of the child after 6 years old is basically 0; because most of the rehabilitation expenses come from family income, due to economic conditions, 45.45% of those who give up treatment are not allowed to give up treatment; in terms of the main way to obtain treatment information and policies for

their children, more than 65% of urban families obtain treatment information and policies for their children through rehabilitation institutions, and the Internet is also important information channel.

Education situation is shown in Table 2. More than

90% of children with autism are enrolled in relevant educational institutions, integrated education or intellectual education schools, and only 7.46% of them stay at home for a long time.

Table 2 Education and social acceptance of children with autism(n=67)

Variable		percentag	frequenc
Education	Rehabilitation institutions	28.36	19
	general schools	25.37	17
	Special education school	38.81	26
	At home	7.46	5
Rejection or dismiss by the school	several times	11.94	8
	1-2 times	38.81	26
	Never before	49.25	33
Situation of being bullied or hurt at school	often	29.41	20
	Occasionally	47.06	31
	no	23.53	16
The type of support you want	Financial support	22.39	15
	Professional support	46.27	31
	Psychological counseling	22.39	15
	Daily life support	8.96	6
Current status of demand in terms of policy	Subsidy receipt	31.34	21
	Zero denial of schooling	46.27	31
	Vocational skills training	59.7	40
	Employment opportunity	40.3	27
	other	2.99	2
Current status of the demand for security agencies	autistic parents'	43.28	29
	consultation by experts	43.28	29
	Weekend nursing care	20.9	14
	treatment and education	64.18	43
	Consulting agency	16.42	11

In terms of social acceptance, more than half of the families of children with autism have experienced unfair treatment of their children being rejected or dismissed by the school. In addition, nearly 80% of children with autism were bullied or hurt by others at school, and only 23.53% of children had not been bullied.

In terms of the types of support for rehabilitation technology, nearly 70% of urban families need professional technical support or psychological counseling; in terms of demand for government policies, most families expect the government to speed up the improvement of the zero-refusal enrollment policy, as well as policy improvements for the vocational skills training system and special education and employment opportunities; in terms of the demand for security institutions, urban families have greater expectations for setting up autism children's treatment institutions, accounting for more than 60%. There is not much demand for whether the institution can provide more information or that the

treatment and education consultation institution is open on rest days.

#### 4.DISCUSSION

##### 4.1 Analysis

According to the "Report on the Development of Children with Autism in China" released in 2017, there are more than 10 million children with autism in my country. Behind every child with autism is almost a family in trouble. In the current process of treatment and rehabilitation of children with autism, the parents of children with autism have assumed almost all responsibilities and obligations. The survey found that urban families of children with autism are facing difficulties in six aspects: economy, daily care, diagnosis and treatment, education, social acceptance, and rehabilitation technical support. And the children are more likely to be discriminated against, and his parents pay more attention to the child's social acceptance.

Urban communities are the main place for activities of autistic family members, and the tolerance and

acceptance of the community to autistic families is extremely important. However, the survey found that the acceptance and support of autistic children in urban communities within Zhejiang is not high. In addition to basic community life, in a broad sense, the support of autistic families by members of the community within the community is relatively scattered and not systematic. This also results in very inefficient implementation of many social support and ineffective results. Parents of children with autism often hope that their families can integrate into the community more harmoniously, but the reality is that there is a significant gap between parents' expectations and the status quo. In view of the current situation and needs of the families of children with single disease in urban areas, correct analysis and reasonable suggestions are urgent.

#### 4.2 Countermeasures

Parents of children with autism in urban areas pay more attention to the social acceptance of children, not only for environmental support, but also the attitudes of surrounding people and the education of their children. Community organizations should actively promote autism-related knowledge and help residents understand the core obstacles, specific manifestations and family plights of autistic patients, so as to improve community residents' awareness of autism and tolerance for autistic families. The family creates a harmonious and friendly social environment to help autistic patients to better improve social functions.

From a nationwide perspective, the overall level of social support for families with autistic children in my country is not high and cannot meet the current family needs. Through a series of case studies, my country has not yet established an effective social support system for children with autism. All of the social support mechanisms have not yet reached an effective level. However, it is undeniable that the level of formal social support from government departments in various provinces has improved. In this regard, a steady progress should be maintained. Provinces and cities should provide autism within various regions according to their own economic development level and social status quo. More targeted service support and emotional support for

children's families.

#### 5. CONCLUSION

The investigation and research on urban families of children with autism in Zhejiang Province found that urban families with autism are facing certain difficulties in all aspects, especially in terms of social acceptance and support. Therefore, the implementation of effective countermeasures is imminent, Service support and emotional support in the family community for children with autism should be increased.

#### ACKNOWLEDGEMENT

This paper is supported by the 2019 Zhejiang Provincial Education Planning Project (2020CGS042) and 2018 Zhejiang Provincial Education and General Scientific Research Project (Y201840146)

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# A Discussion on Teaching Reform of the Practice Course of E-commerce Logistics with Combination of Industry, Colleges and Competitions

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**Abstract:** Practice courses are the main channel to safeguard the goals in cultivating the skills of professional talents. With regard to the requirements on cultivation of logistics talents in applied undergraduate education, professional skills competitions are utilized to proactively deepen the collaboration among enterprises, colleges and research institutions in logistics, forming a new teaching mode of the practice course of E-commerce Logistics characterized by teaching through competitions and learning through working. In view of favoring operations over comprehensive design in practice course, several measures are proposed, including projectization of enterprises' logistics services, full utilization of network professional competitions for virtual teaching and strengthening cultivation of students' vocational skills through collaboration between colleges and enterprises, etc.

**Keywords:** E-commerce logistics, skills competitions, practice course reform

## 1. INTRODUCTION

In recent twenty years, Chinese E-commerce industry has witnessed explosive growth due to high-speed economic development, leading to leapfrog development of logistics industry. By the end of 2020, the express delivery volume had increased from 1.53 million pieces in 1988 to 83.36 billion, ranking the first in the world. At the same time, many E-commerce logistics enterprises fast grow stronger, creating urgent demand for management and skilled talents in E-commerce logistics. Currently, the continuous emerging of new theories and technological innovations in logistics has received high attentions from the state and government. Therefore, various professional skills competitions are introduced to guide cultivation of logistics talents in the new era.

E-commerce Logistics is a compulsory specialized course of logistics management, as well as a comprehensive vocational course for cultivating students' professional practical ability. Usually, this course is arranged in the last two semesters. After learning the course, students will learn about the

meaning, characteristics and operation requirements of E-commerce logistics, the basic business and value-added business of E-commerce logistics, the business flows, system development and design of E-commerce logistics, etc.

## 2. ANALYSIS OF CURRENT TEACHING IN THE PRACTICE COURSE OF E-COMMERCE LOGISTICS

Based on years' experience, the course of E-commerce logistics has made substantial progress with emergence of a batch of excellent textbooks and resources. Furthermore, some excellent teachers also made useful experiments in practice. Nonetheless, there is still a large gap compared with the training instructors of renowned enterprises, which doesn't quite meet the demand for medium and high-end E-commerce logistics talents in real society. This is mainly reflected in the following aspects:

2.1. There is a lack of practice textbooks of the course and most textbooks are designed for business operations of logistics

Currently, most textbooks are about knowledge and theories. As to the practice part of the course, there is a lack of unified textbooks among colleges. In most cases, such textbooks are compiled at college-level after analysis and combing of business operation flows of E-commerce. Furthermore, there is absence of specific and unified curriculum assessment standard. What's more, colleges also face the problems of aligning existing teaching practice resources of the specialty with relevant cooperative enterprises. As a result, each engages in its own business. Therefore, the course still lags behind the goals of applied undergraduate education. However, it's easy to deal with the practice teaching of E-commerce Logistics, since it consists of foreground orders, middle-ground logistics operations and background information processing and involve business knowledge that is characterized by long flows, wide range and high requirements, etc.

2.2. There are inadequate teachers for the practice course and in particularly, experienced teachers with management knowledge

E-commerce logistics is a comprehensive course

offered based on Modern Logistics Management, Warehousing and Delivery Management, Transportation Management, Logistics Information System and other courses. With the explosive growth of E-commerce in recent twenty years, E-commerce logistics also witnessed leapfrog development in terms of both quantity and quality. Therefore, in practice teaching of E-commerce logistics, students should be familiar with the running and business operations of logistics enterprises. For this course, however, most lecturers lack corresponding operation and management experience at enterprises and carry out teaching activities following previous mode, leading to a lack of satisfactory learning atmosphere. As a result, most students will lose interests and enthusiasm and ignore the teaching.

2.3. Students lose interest in the course practice which is mainly about primary business operations in E-commerce logistics

The main curriculum content of E-commerce Logistics is about business operations of E-commerce logistics and the logistics service design. The E-commerce logistics mainly includes logistics business operations and value-added service design which are the key part of course practice. The business operation of E-commerce logistics includes “delivery”, “transportation”, “warehousing” and “distribution processing”; value-added service design mainly includes “option of logistics mode” and “individualized delivery service”, etc. Therefore, viewed from the knowledge content, these primary operations are inevitable. However, students may have learned something about them through the actual scenarios, thus losing their enthusiasm and interest in learning. What’s more, since the goal of applied undergraduate education is to cultivate competent professional applied talents with knowledge of both technologies and management, it’s required that the career development and height of talents cultivation should be stressed in teaching, thus achieving breakthroughs in “logistics service design”.

2.4. Most practice courses adopt case analysis-based teaching mode, resulting in inadequate time and depth of enterprise practice

As a specialty course which focuses on practical operation, E-commerce Logistics demonstrates strong comprehensiveness and applicability, posing higher requirements on teachers’ ability and competence. In the teaching of practice course, as to the difficult teaching content of logistics efficiency improvement and delivery service optimization etc., most students may only carry out business flows analysis and operations based on actual cases of enterprise, since teachers lack such personal experience. Now, there are a large number of students in one class, but only a limited number is accepted by E-commerce logistics platforms and premises. In case of scattered practice, it’s difficult to master the teaching process and enterprises also have difficulties in arrangement of

such short-term teaching practice; however, the business development and management skills are mastered gradually in practice.

### 3. REQUIREMENTS ON CONSTRUCTION OF THE PRACTICE COURSE OF E-COMMERCE LOGISTICS BASED ON COMBINATION OF ENTERPRISES, COLLEGES AND COMPETITIONS

The goal of applied undergraduate education is to cultivate senior professional inter-disciplinary talents who shall master various advanced skills relating to business operation and management in modern logistics industry. The practice teaching based on collaboration between college and enterprise will enable students to clear understand the positions and requirements; the professional skills competitions will enable them to experience the business management of modern enterprises from multiple angles. Such orientation of teaching reform will better improve the teaching quality of the course.

The significance of practical training with combination enterprises, colleges and competitions to the course of E-commerce Logistics is mainly reflected in the following aspects:

3.1. The learning through working will help with close follow-up of market development and enterprises’ practical demand in specialty education. With combination with social practical demand, students are able to convert the basic knowledge into vocational skills, develop global thinking about operation and logistics business management of E-commerce enterprises and well analyze and master the market demand.

3.2. The teaching through competitions will incite students’ learning enthusiasm and improve their academic performance. An important goal of education is to make sure students have mastered the necessary social survival skills. The fierce confrontational discipline-specific specialty competitions will promote reasonable adjustment of content and modes of teaching, thus helping with cultivation of necessary vocational skills through scientific approaches.

3.3. The combination of working with competitions will enable students better master the frontier knowledge of the discipline based on in-depth comprehension and mastering of curriculum knowledge, helping enterprises solve relevant problems in practice. In this way, it will help cultivate students’ business, physical and mental competence, strengthen their capacity to work independently and enhance their awareness of team cooperation.

### 4. ANALYSIS OF MEASURES IN REFORM OF THE PRACTICE COURSE OF E-COMMERCE LOGISTICS BASED ON COMBINATION OF ENTERPRISES, COLLEGES AND COMPETITIONS

4.1. Comb the knowledge of course practice and convert it into enterprises’ practice project while

insisting on comprehensive cultivation of talents  
 Since the goal of applied undergraduate education is to cultivate comprehensive specialized talents with knowledge of both theory and practice, it's an inevitable trend that specialty course should be application-oriented. Based on its business characteristics, E-commerce logistics may be converted into a series of typical projects which allows constant combing of knowledge through analysis. For the difficult course content of E-commerce logistics system design and logistics service optimization in particular, the professional skills competitions platform will help students think actively, analyze practical difficulties and find solutions at enterprises. On this basis, the project design of the course is constantly optimized to improve students' engagement at class, incite their learning initiative and improve their sense of learning achievement. At the same time, the education of people should be insisted in impartment of curriculum knowledge with addition of moral education and vocational competence education, thus ensuring combination of knowledge impartment and moral education at schools.

4.2. Take the opportunity of discipline competitions to improve students' vocational skills in an all-round way through joint guidance of instructors from colleges and enterprise in preparing for the competitions

In the science of business administration, the skills competitions are mostly confrontational competitions on operating decision-making using enterprises simulation software. This provides a platform for exchange and cooperation between teachers and students at colleges and enterprises. Students forms a virtual management team of a company and engage in fierce competition in a simulated market environment. Then, after several rounds of decision-making, they will become familiar with enterprises' operation and management requirements. This poses high requirements on instructors. The joint guidance by instructors from enterprises and schools will achieve satisfactory complementarity of advantages, full utilization of resources and effective infusion of theories and practice. The competitions are guided by the tenet of "connection to the industry, improvement of teaching quality and serving enterprises", which achieves effective linkage between competition process and enterprises' operation flows and well promotes reform and innovation of logistics talents cultivation mode characterized by combination of working and learning. Currently, professional skills competitions have become an important platform for cultivation and identification of talents in all industries.

The competitions and trainings allow students to form teams freely. On one hand, they may try different roles to well-understand the positioning of practicers and the job requirements of relevant

positions, thus improving their vocational competence; on the other hand, the brainstorming of teams will also well train and cultivate students' coordination ability and the awareness of cooperation.

4.3. Carry out practice trainings at enterprises with attachment of importance to teachers with practice experience for cultivating technical backbones with expertise and multiple skills

The teaching quality of courses is mainly safeguarded by highly competent teachers. This is particularly true for teaching of practice courses. Only highly competent teachers will enable students to well master basic vocational skills within a short period of time. As to the operation and management of E-commerce logistics, due to its high requirements on economic efficiency, reliability and timeliness, there must be teachers with high professional skills to provide guidance, so that students will well master the working skills. The utilization of the enterprise platform will strengthen teachers' competence and make up their deficiency in skills at present. Generally, various professional competition platforms try to exactly simulate the real enterprise operation. The confrontational competition will incite all participants to give a full consideration on decision making in operation management, etc. of E-commerce enterprises, thus better enabling cultivation of teachers of course practice into technical backbones with expertise and multiple skills.

4.4. Steer the comprehensive practice knowledge in an all-round way and improve students' vocational skills through strengthened trainings

The applied undergraduate education differs from cultivation of higher vocational professional talents in that it mainly addresses cultivation of competent applied professional talents with solid basic knowledge and the knowledge about technologies and management. In the software system of discipline-specific professional skills competitions, students may try many roles, whereby it strengthens students' ability in correct analysis of operation information, planning design, decision-making, team cooperation and organization and coordination. Furthermore, it helps improve their skills and awareness of enterprise management. In addition, the competitions also require submission of a detailed operation scheme based on the actual situations of an enterprise, which poses much higher requirements on students' expertise and learning ability. This will push students to learn new knowledge and the frontier of the specialty and strengthen their ability in design, planning and other new skills required in the future career.

## 5. SUMMARY

Course practice is an important path and means to achieve the goal of cultivating professional talents. The applied specialty education should not only

ensure student's mastering of basic knowledge but also attach the importance to cultivation and strengthening of their vocational practical skills. As an important specialty course, E-commerce logistics demonstrates strong comprehensiveness and practicalness. For the projectization of enterprises' business in particular, higher requirements are posed on students' competence and ability. The specific enterprise tasks and practice projects of E-commerce logistics will enable students to fully applied their knowledge and comprehend the practical work during proactive engagement; the confrontational trainings through various professional competition platforms will strengthen students' ability in global thinking of enterprises' problems and in working out the solutions; the combination of working and competitions will better help students comprehend and master specialized knowledge and practical vocational skills of the course through utilization of enterprises' advantages in resources. The mutual reinforcement of teaching and learning also provides

a satisfactory practice mode for applied undergraduate practice teaching.

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# Social Media and Politics: Political Discussion Practices in Facebook

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**Abstract:** Recent years the number of political campaigns integrating some form of social media into their communication plans. This paper discusses the relationship between social media and politics by using Facebook as a case study. Facebook as a social media platform claim is a place for self-expresses and communication, however in some extend it shape user's participation with politics, and influence political views. Also, politicians are increasingly using social media to spread information to potential voters and building dynamic, but it also including fake news that

**Keywords:** Facebook, social media, political discussion, U.S. politics

## 1. INTRODUCTION

Facebook is one of the most popular social media platforms. It is not just since they have current 1471 million active users ("Statistic," 2018)[2], but also consider the influence on our daily life, opinions, and political issues. Facebook as a technology company invites certain uses and influence society and politic, since "technologies are essentially political" (Winner, as cited in Bjark, 2012)[1]. This essay will define the way the political implication of the platform, though the analysis of Facebook. Then I will illustrate the tension between Facebook self-representation and critical interpretation. Facebook present as a space for free speech, empower power for users, provide various information. Nevertheless, users afraid to share different political ideas on Facebook, political news Facebook feeds always have similar views, and fake news appeared on Facebook which interferes a country's political issues, even the presidential campaign.

## 2. OVERVIEW OF FACEBOOK

The platform is placed to provide public discourse, afford opportunities to communicate and interact (Gillespie, 2010) [3]. Also, the word self-presentation is the way we present our image to others (Marwick, 2013) [8]. Facebook is a common and worldwide social media platform. Facebook promise "to give people the power to build community and bring the world closer together" (Smithson, 2018) [11]. This is an ideal self-presentation of Facebook platform try to convey to the audience; they proclaim to give people a public voice and serve for society interest. Terranova (2004) [13] states that Facebook as a mess media helps to stimulate the emergence of new

political modes of engagement. More and more citizen use Facebook to participate in the political debates. However, Facebook itself interfere with political issues, limit the users thinking rationally and accept the different range of views. Facebook defined itself as a place give people to have free speech and host diverse ideas, and "platform" work here; in fact, Facebook deftly linking the technical and political (Gillespie, 2010) [3]. Considering the way Facebook operates, Facebook acting more as a platform for political issues. It is a platform which constructed for a candidate to address users and express their political beliefs. As Kim (2016) [4] illustrated, many politicians on Facebook gradually post information based on their roles in campaigning and governing.

## 3. FACEBOOK IS ESSENTIALLY POLITICAL

The first relevant issue in this debate has been about Facebook is a politic platform. Facebooks claim they are run up a company pursued in society's interest and public offering (van Dijck, 2013) [14]. Mark Zuckerberg who is CEO of the Facebook state that Facebook is a global community for a free flow of ideas and culture across nations (Sherri, 2018) [10]. Technically, Facebook provides space like public spheres for the audience to receive various news and information and generating communication within its area for each person to spread their opinions and participate (Bjarki, 2012) [1]. Realistically, Facebook's use in the political discussion has become extremely popular around the world, and shape user's participation with politics (Vraga et al., 2015) [16], the Facebook main function does not serve for society but try to influence political views. Kim (2016) [4] statue political advertisement plays a vital role in the US political campaigns. Facebook itself dominate the advertisement appear to the users. With the development of Facebook, Facebook makes itself linked to increasing social capital and political participation (Macefee, 2013) [5]. Bjarki (2015) [1] illustrates that the order of news and governmental information users browsed is depended on numerous reasons, such as the time users visit Facebook, the kind of friend they interact with, and the link users clicked on to the particular website in the past. All these data Facebook collected to decide push what kind of political news for specific users. For example, the more you browse, participate and support Trump, Facebook will collect more data about you and predict the news and information you will like, then

create an echo chamber, this means you will increasingly only see the news which is support Trumps (Knight 2018)[5]. All the information Facebook offer to you will be similar, and even more, narrow, and your politic views may have shaped and influenced by the information Facebook feeds to you. Besides, Facebook attributes concern of echo chambers to user's own confirmation bias. The personalized echo chambers on Facebook reinforces the user's existing views, and gradually taking away uses the ability to have rationally thought and make reasoned judgments. Furthermore, acting role as a great disseminator who expresses misinformation and fake news to influence the user's political views, this action detriment of making democratic decisions (Lomas, 2018) [6]. Even some people named the US presidential campaign as "the Facebook election," and Kim (2016) [4] argued that Facebook turns into "agonistic arenas of politics." In 2016 US campaign, 3,300 Russian-backed ads appeared on Facebook, Russia provides 120 fake news page, and created 80,000 posters in the Facebook; and these fake stories into viral sensations and 29 million Americans received and looked these fake information. For instance, Facebook spread the news about Pope Francis' endorsing Trump, but he didn't support it (Lomas, 2018) [6]. These misinformation stories on Facebook swayed the election for Donald Trump and interfered with the U.S presidential contest. Also, Facebook was embedding its employee with political campaigns to help them spread election messages (Sherri, 2018)[10]. The way Facebook operates itself is no longer present as the technical company, but a media company (Perez, 2018)[9]. It interprets the political issues and allows fake news virus spread in Facebook, and not provide an open, neutral, equal space. Facebook was acting as the powerful communication medium and that this violates their self-presentation as space for society's interest and provides rational-critical debate.

#### 4. THE ISSUE OF FACEBOOK

The question of the promise of free expression and sharing experience Facebook provide to users has aroused concern. Castell (as cited in van Dijck, 2013) [15] states, Web 2.0 is produced by a conflict between people asserting communication and freedom to create and owners curbing user's newly acquired power. Facebook is the product of the emergence of Web 2.0 (van Dijck, 2009) [14], it provides audience power and opportunities to participate in the digital culture and contribute to increasing the interactivity. Facebook proclaim their mission is creating a space that people can "share and express what matter to them" (Perez, 2018)[9]. Users in the Facebook are not acting as the passive spectator, but turn into the active audience; they empower the ability to receive the information, consider the question and give their comments in the Facebook (Smithson, 2018) [11]. Nevertheless, the

self- presentation of Facebook limits the way we share and express our views. First, Facebook asks users offer real name instead of a nickname (Marwick 2013) [8], this policy is blocking the way people communicate their ideas. With the dismissing of anonymity, internet and Facebook is no longer have the ability to protect people showing their views. When users post information, people will know their name; identity even traced IP address. Second, if users support opinions which is against the mainstream ideas and public opinion, numerous comments will appear under your wall, even use degrading and insulting language to attack; it also engages in name-calling, labeling, shaming, even worst creates cyberbully. For example, in the 2016 election, Clinton supporters using the word "racists," "xenophobes," "deplorable" and so on shamed Trumps supports (Sherri, 2018) [10]. Hence, if their view stands for the minority, users in Facebook will choose to keep silence and refrain from speaking out, because they fear being isolated. Moreover, according to research (Sherri, 2018) [10], around 20 % of users will block or hidden somebody because of different political views posts. Also, consider that users in the Facebook tend to communicate with people you are already familiarity rather than strangers, users may not express distribution ideas to avoid the conflict and maintain the interpersonal relationship (Kim, 2016) [4]. However, according to research (Stoycheff, 2016) [12], Facebook barely "liberate the expression of minority opinions or reduce the conformist behavior." The situation of "The spiral of silence" (Kim, 2016) [4] and cyberbullying violated the Facebook self-presentation which is supply an environment for user's freedom to expression and empowered to an individual to speak, the way Facebook appear is to prevent an individual from speaking out seeming unpopular and different views.

#### 5. CONCLUSION

In conclusion, Facebook as a social media platform allows political issues implicated in the platform. The self-presentation Facebook provide arouse big debate. Facebook claim empower people the freedom to express, make people closer, and host different range of information for users to have rationally thought. Many people critics the interpretation on Facebook. Facebook limit our thinking by providing similar information about politic views, provide fake news disorder our politic decision, and users choose to keep silence if they have different opinions, in order to protect their relationship with friend and cyberbully.

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# Schedrin's Piano Op.20 Playing Tips for The 'Basso Ostinato'

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**Abstract:** The paper combines the author's own professional perspective and practice performance practice to explore the performance of Schedrin's Piano 'Basso Ostinato'. Players should not only have skilled playing skills, but also have richer imagination and creativity; and the creation of music needs to keep pace with The Times. Only by absorbing traditional techniques and highlighting the music ideas of the Times, can music give new vitality. Therefore, the performance exploration of Schedrin's Piano 'Basso Ostinato' can not only have a deeper understanding of the connotation and artistic characteristics of the work, but also provide reference and reference for the better interpretation of the Piano 'Basso Ostinato'. As the most famous piano solo, the Piano 'Basso Ostinato', its complex and changeable rhythm, volume and Tempo grasp, very modern timbre, the use of pedals, all put forward very high requirements for the players. This paper analyzes the playing skills and practice method of piano music.

**Keywords:** Schedrin's, Basso Ostinato, playing skills

## 1. THE TEMPO AND STRENGTH OF THE PIANO 'BASSO OSTINATO'

### (1) Tempo

The reason why people can feel joy, sadness, excitement and other different emotions from the music works, as well as the different imagination that can emerge in their minds such as dance, sea, mountains and rivers after listening to the music, all come from the player's correct grasp of the Tempo when playing. The correct performance Tempo is not only a necessary condition to shape the musical image, but also an important basis to show the musical emotion of the work. When dealing with the Tempo of the work, the player needs to read the score carefully, understand the Tempo terms that the composer notes in the score and the Tempo requirements of the work, such as the composer does

not have special tempo processing of some sentences, generally does not change after the tempo of the performance; second, the player needs to handle the appropriate Tempo according to the emotional changes of the work, can adjust the original Tempo of the music. [1]

In the Piano 'Basso Ostinato', the tempo requirement of the whole song is 'Allegro assai sempre molto ritmico', is a very fast and well-paced allegro. The Tempo of the music is like the pulse of the player. The music shown by different performance Tempos is completely different. [2] The player needs to make reasonable tempo changes within the performance tempo range required by the work according to the emotional changes of the music and the music content he wants to reflect. The beginning of the music (1,2 bars) entered with a strong accent chord, and repeated in the form of a triad, the Tempo of the triad to the end of the second section, the first two bars are the first emotional collision of the song, but the initial emotional advance need not be too intense. Section 3 theme part, mood in sharp contrast with the beginning of the music, players need to play slightly faster Tempo smoothly, right improvisation melody line rhythm changes more, right and right hand in fast play must be neat, practice process should pay attention to avoid the phenomenon of fast and slow, the player need to fully break up practice, grasp the rhythm of the sentence so as to better control the playing Tempo. The loud descending arpeggios of sections 40-44 slowed down, introducing two different emotions interleaved to the apex into calm depression, paving the way for the first change. When practicing arpeggios, we should pay attention to the rhythm accent marked in the score. Highlight the accent can make the Tempo of the left and right hand arpeggios more unified in the rhythm of the rhythm, see Score 1,



Score 1 (Schedrin's Piano Op.20 The Basso Ostinato, Subsections 43-45)

Section 45 enters the first change, the tearing of reason and reality, the bondage and freedom drive emotions up and play at a slightly faster Tempo; Section 79 is an inner resistance to the failure to break through the reality; reproduced in section 80, different from the steady part at the beginning. Subsection 105 makes a second change, as with the first, using a faster Tempo. Section 127 begins completely repeating the subject section, playing the same Tempo as the theme section. The end echoes the beginning, with the continuously repeated chord and very fast, slightly slower when the left octave intersects with the right monotone in the 171 bar, and the last triplet in the left hand accelerates the end chord to *sfff*.

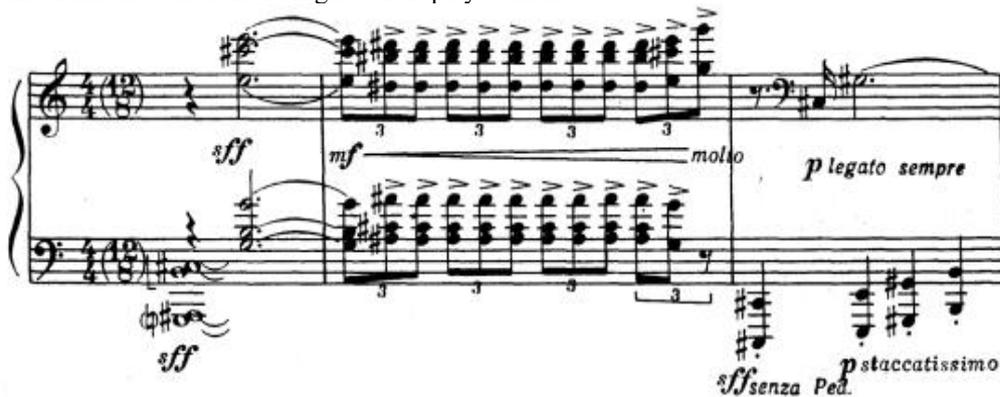
The whole song is played faster, requiring the player to touch the fingertips of the fingers during the running process. The quick lower key of the fingers and the fingertip strength concentration can make the sound not loose during the fast running process, and the wrist needs to relax at the time, so that the music will not lose liquidity.

(2) strength

The change and contrast of sound in musical works stems from the different strength when played. Rich

changes in strength can not only make the performance full expressive, but also add color to the musical works. Composers have different periods of playing strength. In the 20th century, both the music field and piano technology had reached its peak, composers paid great attention to the pursuit of sound, and did their best to play the piano sound in composition, so strong intensity contrast became an essential factor in modern music works. As a Piano 'Basso Ostinato' as a modern polyphonic piano work, the rich color change of the whole music also needs to be reflected by various efforts. [3]

In the piano 'Basso Ostinato', the *sff* intensity marks, bringing a strong auditory impact to the audience. The tenor chords are repeated in triplets, with *mf-cresc* pushing the mood up and creating a stressful atmosphere. The end of the mood is attributed to the first shot of the 'Basso Ostinato' melody in the third section, and the impromptu melody of the right hand is entered by the weak beat, allowing the strength change of the *sff-p* to both contrast the theme part to the beginning, and to connect the emotional change well. See Spectral Score 2,



Score 2 (Schedrin's Piano Op.20 'Basso Ostinato', bar 1-3)

The theme part mainly follows the development of the right hand impromptu melody line to change in strength. The players need to combine the emotional content of the work, imagine the beautiful spiritual world in their own heart, and play the impromptu melody line of the right hand part with an expression. The left hand 'Basso Ostinato' variant melody has been repeating a melody, it is easy to lose power in the process of playing, so it needs to change

the strength according to the strength of 4 / 4 rhythm, keep the rhythm dynamic.

The piece added new material for the first time in section 45, and the mood continued to rise with strength by *mp-f-sf*. The left hand bass appears irregular sound from bar 58, breaking the original rhythm, as if the heart has not been calm. See Spectral Score 3,



Score 3 (Schedrin's Piano Op.20 The 'Basso Ostinato', Subsection 58-63)

After the intense impact of inner emotions,section 79 repeats the theme section,but the mood is no longer as calm as before and needs to be compared with before.Strength to maintain the ff,music mood is more firm.The right hand improvised melody needs

to be played expressive based on the ff,but without the previous ideological relaxation,it becomes more paranoid; the left hand 'Basso Ostinato' variants are also more radical.See spectral Score 4,



Score 4 (Schedrin's Piano Op.20 The 'Basso Ostinato',Subsection 77-81)

Section 105 joins the new ideas again,and this addition is both the last change and the biggest part of the overall change in intensity.The composer applied

both the highest and lowest vocal areas in this section,powered by pp-f-ff-dim.See Spectral Score 5,



Score 5 (Schedrin's Piano Op.20 The 'Basso Ostinato' Subsection 111-116)

Just like the inner complex emotions in a moment again little by little all out,all the yearning beauty and buried pain in the thorough impact into a little spark

gradually disappear,the mood is also gradually back to calm,the strength gradually weakened down (dim.poco a poco) .See Spectral Score 6,



Score 6 (Schedrin's Piano Op.20 Basso Ostinato,bars 117-120)

Subsection 127 begins with the subject section fully returned.Because the composer did not add any new material,the player need to play according to their own understanding of the work and their processing of strength,but pay attention to the completely mechanical repetition of the theme of all the strength

changes will lose the strength level contrast,therefore,in this part,the composer in the score,such as 138 section 'senza cresc' meaning not to strengthen,and the right hand melody to continue upward,and in the next section marked 'pp',originally need to strengthen melody not only not to

strengthen, but also need good control. In this way, the exact same musical sentences make different

efforts. See Spectral Score 7,



Score 7 (Schedrin's Piano Op.20 The Basso Ostinato, Subsection 137-139)

The end of the song echoes beginning and end, but the mood has shifted from low to clarity, rising intensity, ending with *sf*.

The emotional changes and color contrast in the Piano 'Basso Ostinato' are very rich. Only from the work itself, deeply understand the content and emotion of the work, correctly understand the strength of the music, combined with their own actual performance, multi-angle and multi-level strength processing, can this work perform better.

2. RHYTHMIC EXPRESSION IN PERFORMANCE  
Composer Schedrin's used 4/4 alternate beats for the Piano 'Basso Ostinato' with 12/8 beats, mixing changing rhythms to give the work distinct and distinctive features. Since the Piano 'Basso Ostinato' is a modern polyphonic work with its own rhythm in

two high and low independent sound parts, the slow practice of break-up is essential in practice. Only by mastering the stress and rhythm changes of the music melody in the sound parts respectively, can the two sound parts cooperate well when playing with the hand without losing the independence of their own sound parts, but also keep the rhythm clear.

The 'Basso Ostinato' melody on the left hand uses almost 4/4 beats of fixed rhythm throughout the piece and is presented in accurate repetition (3-42, 79-104 and 127-166), enabling the music to maintain the musical tension for a long time while accumulating momentum in the regular rhythm. When practicing, you should be playing according to the 4/4 beat rule (strong-weak-substrong-weak). See Spectral Score 8,



Score 8 (Schedrin's Piano Op.20 Basso Ostinato, bar 4-9)

The right-hand improvised melody section was performed on 12/8 beats, with each section divided in four sets of triplets, very similar to the 4/4 beats. It can be seen that although the fixed rhythm of the two acoustic parts is different, the bass part fixed sound type is mainly used as the center texture rhythm. The 12/8 beats is more fluid and variable than the 4/4, and fully meets the characteristics of two different

melodic ideas. In bars 15-17, the right-hand improvised melody changes the accent law of the original rhythm, appearing in a tangential rhythm, making the melody more modern rhythm dynamic. It gives people a more free and relaxed feeling, just like floating freely up and down in the cloud without traction by gravity. See Spectral Score 9,

Score 9 (Schedrin's Piano Op.20 The Basso Ostinato, Subsection 14-19)

Subsections 65-78 are the most distinctive contrasting rhythm segments of the whole song. The high and low voices have broken the original fixed rhythm, the irregular accent constantly changes the position of the fixed rhythm remake, the small section is also weakened together, and the sound effect is stronger, the rhythm is stronger. This is in sharp contrast to the previous light and active sense of rhythm, here like the waves rolling, surging, pushing the whole song mood to a climax. Players in the

practice should pay attention to the melody of the right hand in the chord, fingers to have better endurance to play a clear melody; the left hand to jump, rhythm and strength changes are great challenges for the player. Therefore, the player needs to practice by constantly practicing slowly with one hand, while paying attention to the level of sound, and then Tempo up after proficiency. See spectral Score 10,

Score 10 (Schedrin's Piano Op.20 The Basso Ostinato, Subsection 69-76)

### 3.CHANGE OF KEY TOUCH MODE AND TONE AND COLOR

The purpose of learning to play is to be able to play wonderful sounds with the hands of the player. If you only pay attention to the accuracy, rhythm and Tempo of the music, and ignore the control and change of the sound, the real meaning of the performance will be lost. The right way we can make the piano sound is by touching the keys through our fingers and the different ways that touch the piano in different tones. Even the same piano, the same melody, produces a very different timbre due to the different way of touch. Playing lies in the expression and transmission of sound, therefore, the correct way of touch the key is the core and foundation of performance.

The Piano 'Basso Ostinato' uses traditional polyphonic techniques in its creation, and notes a lot of 'marcatissima' (is very clear in the music). The composer not only inherits the tradition in his writing, but also requires the players to adopt traditional playing methods to keep the sound clear and thorough.

In the impromptu melody part of the right hand, the composer marked us 'legato sempre' (always keep playing), that is, the Tempo of the key under the fingertips when you touch the key, immediately release the key and connect the next sound, the wrist stable during the connection, and the key edge can be slightly raised, not stiff, make the connection between sound and sound more smooth. When making the next

sound down, the forearm needs to turn slightly like right or left according to the direction of the note, so that the sound of the next note after each sound is just played, ensuring that the sound is broken and sound, making the melody smooth and clear. In the process of palm joint must avoid collapse, palm joint is the key to ensure that fingers actively play, palm joint collapse will practice the use of wrist or forearm strength, make the fingers cannot standard standing and fingertips, cannot be concentrated, so the sound will present loose state, lose penetration. The loud impromptu melody lines are like continuous peaks, one after another dynamic, especially need to pay attention to the same note in the melody, touch the key according to the rhythm of the rhythm adjustment, so that the tone is deep and shallow.

In the left-hand bass, the composer marked us the 'staccatissimo sempre' sustained disaccato, Basso Ostinato variants performed in a continuous octave saccato. First of all, the 'shelf' of the octave note must be firm. The palm joint needs to form a solid arch, the arm remains stable and relaxed, the wrist is concentrated, and the strength is transmitted to the keys through the thumb and small thumb. In the staccato, the wrist needs to make full use of the gravity of the arm and the rebound force of the keys, so that long playing can be completed. Low voice 'Basso Ostinato' variant melody is calm and deep, with steady progress in continuous repetition, you need to keep the sound clean, and the sound of touching the key should be more focused.

The Piano 'Basso Ostinato' is a modern music color, and has a unique and innovative work. The player needs to integrate the 'percussion' elements of modern music in the traditional key mode, and embodies the repeated strong chords and continuous accent in the music, so that it can have a metal-like sound, forming a strong and bright timbre. When

touching the key, the wrist needs to keep relaxed, use the strength of the forearm muscle group to convey the strength to the fingertips; when lowering the key needs to do fast and accurate, the strength always needs to be lowered, the palm, palm joint with the same fingers should stand firmly, making the work strong and powerful.

#### 4. REASONABLE APPLICATION OF THE PEDALS

The rational application of pedals is a crucial part of the playing process. Playing without pedals is like a dish without seasoning. Although you can feel the original flavor of the ingredients, it is too monotonous. It can be seen that the reasonable application of the pedal can not only make the performance more vitality, but also show the rich sound effect of the work.

The requirements and use of pedals from different periods, different styles and different styles are also completely different. Take the Piano 'Basso Ostinato' as an Score, the composer did not label the pedal part in the score, as an Score, the composer did not label the pedal part in the score, but marked the music without the pedal (*senza Ped*) section, because the pedal without the pedal part makes the music difficult to keep the music clear, from the perspective of the pianist, leaving us space to freely use the pedal according to the sound needs, but also provides a reference for the correct performance of the work.

First, the player needs to use the pedal reasonably according to the rhythm in the work. In the Piano 'Basso Ostinato', the changing rhythm also drives the change of mood. In the large emotional changes of the music, the use of the extension pedal can be used according to the irregular strong sound to highlight the rhythm characteristics of the music and fully convey the mood of the music. See Spectral Score 11,

The image shows a musical score for piano, specifically for the piece 'The Basso Ostinato' by Schedrin, Op. 20, Subsections 64-68. The score is written in bass clef and consists of two staves. The music features a series of chords and melodic lines. Dynamics include *sf*, *P*, *sf*, *sim.*, *cresc. molto*, and *poco a poco*. The score is marked with 'sim.' and 'cresc. molto' in the upper staff, and 'sf' and 'poco a poco' in the lower staff. The music is characterized by a strong, rhythmic bass line.

Score 11 (Schedrin's Piano Op.20 The Basso Ostinato, Subsections 64-68)

Secondly you need to maintain a clear and smooth tone during playing. Since the left-hand 'Basso Ostinato' variant of the music is low and undulating, the sound easily becomes cloudy when the

pedal is added, so the player can use the pitch pedal in the strong beat of each bar, according to the strength of the bass rhythm. See Spectral Score 12,



Score 12 (Schedrin's Piano Op.20 Basso Ostinato, bar 4-6)

Finally, the player needs to apply the pedal reasonably according to the sound and color change of the work. With the repeated strong chords and continuous stress in the music, only the arms, wrist and fingertips are far from enough to achieve a powerful

sound, which is needed to highlight the strong contrast of timbre. In repeated strong chords, the delay pedal needs to be replaced after each shot, keeping the sound clear while preventing sound interruption. See Spectral Score 13,

Musical score for Score 13, showing piano and bass staves. The piano part includes dynamic markings such as "molto", "sf", "p sub.", "marcatissimo", and "cresc. possibile". The bass part features complex polyphonic textures. The score is marked with "c 1478 x" and "1961".

Score 13 (Schedrin's Piano Op.20 The Basso Ostinato, Subsection 168-174)

There are certain differences in the timbre of each piano, and each player applies the pedal in different ways, even if the pianist plays the same piece on a different piano, or twice on the same piano. It can be seen that the player needs to listen carefully to his playing sound, and properly use the pedal according to the needs of the sound.

##### 5. CONCLUSION

After studying and analyzing the relevant literature, this paper explores the Schedrin Piano 'Basso Ostinato' through the performance skills of the work. During the inquiry, the following conclusions are drawn:

First of all, we have a new understanding of modern polyphonic music: first, modern music has very distinct personality and rich emotional changes, the player needs to play not only skilled skills, but also need more imagination; second, the innovation and

development of modern music is not completely divorced from traditional music, in the piano 'Basso Ostinato', composer Schedrin followed the pace of The Times, highlighting the traditional techniques, not only brings a unique sound, but also gives us music a new vitality.

Secondly, by combining theoretical knowledge with their own practical practice, I have a deeper experience in playing: First, The time background of the composer needs to be combined before practicing this composition, In-depth understanding and mining of the background and characteristics of the work creation, To more accurately grasp of the work style in practice; Second, While playing the Piano, The 'Basso Ostinato', The work contains more modern timbre changes and contrast in sound, Need to listen to your own performance more during the practice, Sonic changes caused by detecting different

touch key modes by listening; Third, After passing through a lot of basic practice, A flexible and accurate understanding of the musical terms such as Tempo, strength, pedal, etc.) given by the composer in the work is required, And combined with the rich emotional changes of the work, Only when I can play this work better.

Polyphonic music flourished in the Baroque period of the 17th century, with a broad sound range characteristics and a high artistic space, which has always promoted the connotation and thinking breadth of world music. In the Piano 'Basso Ostinato', the composer Schedrin integrates traditional polyphonic genres with modern techniques, gives innovation based on tradition, and makes the use of national music elements, so that the work not only has rich emotion, but also has rich national cultural heritage. This paper explores the

performance of modern polyphonic music 'Basso Ostinato' music, which has a deep understanding of the development, innovation and artistic characteristics of polyphonic music, and hopes to provide reference for the better interpretation of piano music 'Basso Ostinato'.

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# Women's Voice Has Great Power

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**Abstract:** The issue of gender inequality and discrimination, especially against women, has been an essential and evergreen proposition down through the long history of human civilization. It has evoked heated discussions and controversies diffusely, of which the perspectives range from political systems and social values to dressing styles. Much public consensus has been devoted to the issue of sexism and feminism, while sex remains a sensitive topic that compulsory school education and domestic discourse avoid as taboo. There are rich instructional materials in literature, films, and television programs, which can have significant pedagogical meaning for youths' holistic education and females' self-esteem, self-love, and self-improvement, if used intellectually.

**Keywords:** Gender inequality; gender stereotype; prejudice; women's voice

## 1. INTRODUCTION

The undesirable social phenomenon of gender inequality never ceases since men take over the throne in society. Men are usually more robust in physical strength and willpower, while women are considered weaker and not capable enough to support themselves; thus, the arrogant men think of women as their appurtenances, instead of individuals with a complete personality just as men. Worsely, these stereotypes come not only from the opposite sex. Even women themselves think it right and seldom question, since they have been oppressed for a long time and believe that women should rely on men. The silence and stereotypes of gender issues result in the severe deficiency of sex education and the striking absence of gender consciousness among young people. Gender stereotypes are inveterate, causing millions of miseries. Throughout history, women have been the most harmed by prejudice and sexism. Luckily, the recent decade has seen a boost in the volume of women's voices; they make creative use of multiple resources and media to denounce the injustice of their gender.

## 2. EXEMPLIFICATIONS

### (1) Women in literature

Young women have been taught to memorize, generation after generation, that their ultimate mission is to improve the so-called "virtues" as a qualified wife and mother. Women have scarcely been allowed to participate in social life or have a career and property of their own. A good marriage that brings wealth and stable life is the best outcome many young women can perceive. The well-known

first sentence of Jane Austen's *Pride and Prejudice* (1813) has ironically exposed people's obsession with material-based marriage:

It is a truth universally acknowledged that a single man in possession of a good fortune, must be in want of a wife. (p. 1)

What Austen meant was that a single young woman must want a husband with a large fortune. Mrs. Bennet and Elizabeth's younger sisters spent most of their time gossiping around for information about single gentlemen with a great property and attending balls to make acquaintance with such men. Thus, men were the center and basis of women's life.

In a male-dominant society, a woman's value of life was determined by whether she could bring happiness to the man she loved—or, more often, married. Under the patriarchal system, the perfect female image was beautiful, virtuous, gentle, silent, sensitive, compliant, and loyal to love and marriage. In 1878, Henry James first published his *Daisy Miller*. When Daisy walked the street in Rome together with Giovanelli and Winterbourne, Mrs. Walker, a friend of Winterbourne, expressly took the carriage to pick her up, thinking Daisy's behavior as an absolute violation against mores and conventions. Daisy refused, while Mrs. Walker insisted and got angry, saying, "it may be enchanting, dear child, but it is not the custom here" (Webster's Thesaurus Edition, 2006, pp. 44-45). Mrs. Walker represented those wrapped by the old tradition; they asked their kind to obey too, but it was not their fault overall. To some extent, obedience kept them safe from graver harm.

In the 1880s, the master of short story writing Guy de Maupassant published two of his masterpieces: *The False Gems* (or *The Jewelry*, 1883) and *The Necklace* (1884). Like each other, the two heroines, Madame Lantin and Mathilde, are vain, ruthless, dishonest, and undecent women. Madame Lantin is cleverer, better adept at calculating and scheming, unbelievably calm to play her role as a perfect housewife. Mathilde is less lucky, less connected, and more self-conceited, so she loses the opportunity to become the minister's mistress. However, in essence, they were in the same weak position as they represented the "married prostitutes" in 19th century France who, after getting married, became or tried to become the mistress of wealthy men with a higher rank. They combined with some easy-fooled man to guarantee their reputation and the legitimacy of any child, while most of the family incomes are covered by the patrons. Sometimes even the husbands acquiesced the false marriages since they could

benefit from the triangle relationships, such as getting a promotion. During those periods, women had neither chance to work and earn their living by themselves nor possess their wealth as independent individuals. The most selected choice for those women to climb up to a better status and gain more fortune was by seducing with appearance and betraying their bodies to the opposite sex. It was a tragedy bred by the whole society, and women themselves had no awareness of it.

#### (2) Women on screen

It is pathetic that women had seldom been informed that they too possessed the same rights and talents to achieve in science and technology, laws and politics, literature and arts, exploring their possibilities and enjoying their lives thoroughly. They did not even know they had another choice. However, like Daisy proudly refusing Walker's requirement, there is always someone brave enough to come forward to point out the error. Recently in China, many works on women's rights have emerged in the film and television industry. *Sisters Who Make Waves* (2020) is a variety program that shows the process of 30 different women above the age of 30 competing to debut in a 7-member girl group. The show has an idealistic aim: to break down the prejudice on women's age, appearance, figure, and capability. Although it seems ironic when the "sisters" are advertising cosmetics of the sponsor brand in the middle of every episode, it still has great significance. When the audiences give flowers and applause to the young and beautiful girls with smooth, snow-white skin and slender figures, the older female celebrities are forgotten in the dark corner. It is not that mature women should be dressed, trained, and worshipped as the young stars. The form and content of *Sisters Who Make Waves* are not wholly appropriate when seen from a proper feminist perspective; at least, it has successfully drawn public attention to the stereotypes and discrimination of women in the entertainment industry, particularly those above 30 years old. It has been such a long time in history that women's voices have been ignored or silenced. It is time to bring this issue to the table.

Another work in the new media industry is a series of short films called *Let Her Speak* (2020). The series was divided into eight units in female monologues, dissecting the contemporary female's living dilemmas in examples of intrahousehold labor division, domestic violence, facial anxiety, older single women, preference for sons over daughters, and original family defects midlife crisis, and objectifying women. It imitates a BBC monologue series called *Snatches: Moments from Women's Lives* (2018), which celebrates the anniversary of women's right to vote. Both works are created primarily by women and speak for women. These monologues are inspired by women who speak out, challenge the status quo, or resist action at high personal cost. Admittedly, the

issues involved in the Chinese version are less urgent and universal for women worldwide; but they are crucial for Chinese society. More importantly, *Let Her Speak* openly presents and offers a chance to discuss the taboos that have been covered up for ages. The value of this work lies in the courage and attempt to reveal the fig leaf.

In December of the same year, talk show actress Yang Li made a sharp, biting sarcasm in the New Year show, shouting, "Do men still have a bottom line?" The question again successfully "offended" and irritated the male audiences, and then she got a tip-off. Talk show actresses like Yang Li are pioneers who openly declare war against sexism even if it exposes themselves to abuse and attack. However, these costs pale in comparison to all the harm that women have suffered before. Just as an audience comments, "Yang Li's talk show was only 50 percent completed on stage, and the remaining 50 percent was done after her talk show." Besides, women resisting oppression and pursuing rebellion are constantly vilified for inciting gender antagonism. Another talk show actress, Hannah Gadsby from Australia, argued in her 2018 farewell show why is it that when an actor expresses his anger on stage, it is often seen as legitimate sought-after freedom of speech, and when an actress expresses her anger on stage, she is considered to be making a sensitive fuss? (Gadsby, 2018) The harsh interrogation cut straight to the soul and drew public discussion on women's rights. The first talk show actress appeared in 1954, the 37-year-old Phyllis Diller, mother of five children who satirized her irresponsible husband on stage. Nearly 70 years later, women's appeal and condemnation have never changed.

There are also excellent TV series that show independent female images. *The Ideal City* (2021), revealing the harsh reality of the work field, is significant progress in Chinese teleplays. Adapted from the novel "Su Xiao's War," the story revolves around a cost engineer called Su Xiao fighting for her career as an outstanding economist in the architecture industry dominated by males. It seeks to show some interpersonal conflict against females in the Chinese workplace and the positive value of an ordinary working woman pursuing her professional ideal. As a model, Su Xiao reminds women of the young generation that on the modern battlefield, the best way to combat gender discrimination is to combat it by themselves.

### 3. CONCLUSION

Gender inequality may never cease, but neither does women's voice of resistance. Brave and intelligent women pioneers have been working so hard to make their voices heard, which has profound significance for the legitimate demand and rebellious spirit of gender equality to pass down through successive generations. They must and will keep going at all costs, for only women's voices have the power to

save women.

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# Research on the Development of Cold Chain Logistics of Agricultural Products under the Stall Business

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**Abstract:** Affected by the new crown epidemic in 2020, the stall economy has re-emerged. As a very large part of the stall economy, the agricultural products, whose quality will directly affect the physical and mental health of consumers. As we know, the quality of agricultural products is mainly guaranteed by cold chain logistics. Based on the background of stall business, this article proposes corresponding development strategies and suggestions for the problems in the development of cold chain logistics of agricultural products under the economic impact of stalls after the epidemic.

**Keywords:** The stall business, Cold chain logistics of agricultural products, Development Strategies

## INTRODUCTION

With the adjustment of the industrial structure, China's agricultural product industry has developed rapidly and has become the main source of income for farmers and the leading pillar industry in some regions. In 2020, affected by the epidemic, the stall business rose again. As a very large part of the stall business, the return of the stall economy is both an opportunity and a challenge for agricultural products. Agricultural products are perishable, highly affected by temperature changes, regional production, and off-site transportation and sales. Combined with the increased emphasis on food quality after the epidemic, how can they seeking better development in the economic atmosphere of the stall business which is "small, scattered and chaotic" to a certain extent. And how to solve the quality problems, circulation problems, and sustainable development problems of agricultural products is also worthy of serious consideration and research.

The influence of stall business on the development of cold chain logistics of agricultural products

From the perspective of the national economic development situation, the "market business" can indeed provide beneficial support for the development and recovery of the private economy. But for a long time, the stall business has been rejected by the mainstream due to its difficult to supervise, its characteristics of "small, scattered, and chaotic", and the difficulty of docking the taxation system. In 2020, affected by the epidemic, the

economy was hindered, and the stall business was revived. As an important object in the stall business, agricultural products have also been greatly developed with the development of the stall business, with more distribution channels and a significant increase in sales. However, as agricultural products are perishable, highly affected by temperature changes, and have regional production and remote transportation, how to ensure their quality under the background of "small, scattered, and chaotic" stalls is also a major challenge to its development. All in all, restarting the "stall business" can largely alleviate the development difficulties caused by the epidemic and realize the sound development of the domestic private economy. Moreover, it is bound to bring stimulus to the development of the agricultural product logistics industry, especially in areas such as cold chain logistics, it is not only an opportunity but also a challenge.

## 2. PROBLEMS IN THE DEVELOPMENT OF COLD CHAIN LOGISTICS OF AGRICULTURAL PRODUCTS UNDER THE STALL BUSINESS

### 2.1 Lack of market safety supervision system

It is not normative enough to spread the stall business, it often operates in a simple place and carries out the environment at will. Some stalls dominated by agricultural products are such as vegetable stalls, barbecue stalls and so on, are often simply laid out besides the street. Dust, etc. make it difficult to ensure their environmental hygiene and safety. In addition, the sources of agricultural products on the market are complex and diverse, some are self-produced by farmers, some are from wholesalers, distributors, etc., behind the huge circulation of agricultural products, whether the agricultural products received have been inspected and quarantined, and whether they can meet health and safety standard is a question. And also, in the process of market operation, the lack of safety supervision departments for the economic entities of the stall is also one of the reasons for the confusion.

### 2.2 The cold chain logistics standards of related agricultural products under the "stall business" need to be improved

At present, the state has issued many policies and standard requirements for the cold chain logistics of

agricultural products, but the cold chain logistics standards for agricultural products under the stall business are relatively lacking. The "small, scattered and chaotic" characteristics of the stall business have brought certain challenges to the cold chain logistics of agricultural products. At present, most of the agricultural products sold on the street stalls have the characteristics of "no pre-cooling, no packaging, no cold transportation, no refrigeration", etc. There is no uniform cold chain logistics standard for agricultural products from the place of production to the place of sale to regulate their circulation. This has also led to uneven quality of agricultural products on the stall market and serious damage to the goods.

### 2.3 Infrastructure of agricultural products cold chain logistics needs to be improved

The development of the "stall business" has promoted the development of cold chain logistics for agricultural products, but at the same time it has also put forward higher requirements. The mobility and randomness of the operating environment of the stalls, and the sharp increase in the sales of agricultural products in the stalls, have all put forward higher demands on the cold chain logistics infrastructure of agricultural products. It is necessary to meet the mobile, storage and transportation environment of agricultural products at anytime and anywhere, and is also need to meet the demand of regional production and processing, off-site transportation, all of these require more cold chain transportation facilities and equipment. At present, China's cold chain logistics parks, cold storage, refrigerated trucks, etc. are far from enough, and can't guarantee the safety, the orderly circulation of agricultural products in the stall business.

### 2.4 The stall owner' awareness of cold chain logistics of agricultural products needs to be strengthened

At present, the main body of the stall business is mainly self-employed, and most of the stall owners are unstabilized staff. Most of them have weak awareness of agricultural cold chain logistics. This has also caused many agricultural products to be sold without pre-cooling, packaging, and refrigeration. The occurrence of these phenomena on the one hand greatly reduces the effective storage period of agricultural products and causes serious damage to agricultural products, on the other hand causes related food safety issues, some consumers have health and safety issues after purchasing edible related agricultural products.

## 3. DEVELOPMENT STRATEGIES OF COLD CHAIN LOGISTICS OF AGRICULTURAL PRODUCTS UNDER THE STALL BUSINESS

### 3.1 Improve the market safety supervision system

Give full play to the government's macro-control role, and establish a safety supervision and management department for the stall business and improve related supervision and management systems under the guidance of the government. The personnel of the

safety supervision department shall strictly control the sources of agricultural products, carry out inspection and quarantine work on the agricultural products that flowing to the stall market, and strictly control the quality and safety of agricultural products. During the sales process of the stall market, the relevant management personnel should enter the market regularly, conduct quality inspection and random inspection of the agricultural products that sold in the stall, and conduct standard requirements and safety guidance on the operating environment of the operators.

### 3.2 Improve the cold chain logistics standards under the stall business, and regulate the circulation requirements

The government and relevant departments should consider the market conditions of the stall business, and speed up the improvement of agricultural cold chain logistics standards while regulating their market operations. In view of the origin of agricultural products and the different types of agricultural products, standard requirements such as pre-cooling, processing and storage of the origin should be formulated. In the circulation process of agricultural products, relevant standards should be formulated according to product categories to regulate circulation for circulation packaging, transportation conditions, storage conditions, etc. In the selling process of agricultural products on the stall, relevant standards and standard operations should also be formulated for the sales environment, sales packaging, and storage environment.

### 3.3 Increase the construction of cold chain logistics infrastructure for agricultural products

With the prevailing of stall business, the sales of agricultural products have increased substantially. Agricultural products have the characteristics of being perishable, seasonal, regional production, and off-site sales. Therefore, to meet the massive demand of the stall market and the demand for off-season sales, it is necessary to increase investment in cold chain logistics infrastructure. According to the productivity in production area of agricultural products, we need to rationally plan the construction of cold chain logistics parks and cold storage at the production area, increase the investment in cold chain transportation equipment at the production area. And we also need to increase the investment in cold storage, cold chain distribution centers, and refrigerated trucks and so on during the circulation process in order to ensure continuous chain. At the same time, in combination with the mobility and randomness of the stalls, it is necessary to strengthen the investment in refrigerated transportation equipment in the city, especially the investment in small refrigerated trucks and incubators.

### 3.4 Enhance the awareness of cold chain logistics of agricultural products for stall owners

Enhancing the cold chain logistics awareness of the

stall owners of agricultural products is particularly important for the quality control of agricultural products in sales process. On the one hand, before the stall owner sets up a stall, relevant pre-sale training and assessment, such as training and assessment of basic agricultural products and agricultural cold chain logistics standards, can be carried out. After the assessment is passed, a stall can be set up for agricultural product sales. On the other hand, during the operation of street stalls, regular random checks can be made to check whether the operation process is standard, whether the agricultural products are standard and the sales is hygienic. Those who do not meet the standard requirements can be punished, and those who meet the requirements and do a good job

can be given relevant spiritual and material subsidies, etc.

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# An Analysis of Redemption in The Horse Dealer's Daughter from the Perspective of Freud's Theory of Personality

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**Abstract:** The Horse Dealer's Daughter is one of the masterpieces of David Herbert Lawrence, the most controversial British writer of the 20th century. The conflict between the id, the ego and the superego in Freud's Theory of Personality is well reflected in the hero and heroine of The Horse Dealer's Daughter. This article tries to interpret the development and changes of the relationship between Mabel and Fergusson in The Horse Dealer's Daughter in light of Freud's Theory of Personality. By analyzing the personality structure of Mabel and Fergusson, we find out that the reason why they finally break through the constraint of the society and obtain redemption and blissful ending for the id overcomes the superego and they follow their heart.

**Keywords:** David Herbert Lawrence; The Horse Dealer's Daughter; Freud; Theory of Personality

## INTRODUCTION

Lawrence is a famous English novelist and poet in the 20th century. His works have a profound and far-reaching impact on later literary creation. His works are concise and vivid, focusing on psychology of characters to show the contradictions in human emotions as well as the complex inner world. His novel The Horse Dealer's Daughter is about the story of Mabel and Fergusson who are from different classes, and try to break the shackles of an industrially civilized society for love. The protagonist in the novel is Mabel, the daughter of horse dealer, leading a wealthy life in the past. As her father passes away, her family is dilapidated and ran into debts. Her three brothers are merciless and mercenary. Confronted with dilemma and enduring long-time loneliness, Mabel is extremely desperate and helpless. She eventually decides to drown herself. Village doctor Fergusson notices that scene and risks his life to save her from the cold pond. Since then, the relationship between them begins to change, the ending of the novel is Fergusson proposes Mabel and decides to get married as soon as possible. Mabel and Fergusson have a lonely and depraved life for a long time, repeating monotonous life with extremely poor emotional life. Driven by the instinct and long-suppressed inner desire, they are attracted by each other, eventually establishing marital relationship, and having sought redemption. This

article tries to interpret Mabel and Fergusson's id, ego and superego by means of Freud's Personality Theory with the development and change of their relationship, and further analyzes the themes of redemption in this novel.

## 1.2 Freudian Theory of Personality

The Ego and the Id was a prominent paper by the psychoanalyst Sigmund Freud and was first published in 1923. It is an analytical study of the human psyche outlining his theories of the psycho-dynamics of the id, ego, and superego, which is of fundamental importance in the development of psychoanalysis. According to this Freudian model of the psyche, the id is the set of uncoordinated instinctual trends; the superego plays the critical and moralizing role; and the ego is the organized, realistic part that mediates between the desires of the id and the superego.

The id is the disorganized part of the personality structure that contains a human's basic, instinctual drives. Id is the only component of personality that is present from birth. It is the source of our bodily needs, wants, desires, and impulses, particularly our sexual and aggressive drives. The id contains the libido, which is the primary source of instinctual force that is unresponsive to the demands of reality, and acts according to the "pleasure principle"—the psychic force that motivates the tendency to seek immediate gratification of any impulse defined as seeking to avoid pain or unpleasure (not "displeasure") aroused by increases in instinctual tension.

The ego acts according to the reality principle. At the same time, Freud concedes that as the ego "attempts to mediate between id and reality, it is often obliged to cloak the [unconscious] commands of the id with its own [preconscious] rationalizations, to conceal the id's conflicts with reality, to profess...to be taking notice of reality even when the id has remained rigid and unyielding."(Sigmund Freud (1933). p. 110) The reality principle that operates the ego is a regulating mechanism that enables the individual to delay gratifying immediate needs and function effectively in the real world. The ego is that part of the id which has been modified by the direct influence of the external world, representing what may be called reason and common sense, in contrast to the id, which contains the passions. It serves three severe masters...the external world, the superego, and the id

and to find a balance between primitive drives and reality while satisfying the id and super-ego. Thus, the ego, driven by the id, confined by the superego, repulsed by reality, struggles... [in] bringing about harmony among the forces and influences working in and upon it" (Sigmund Freud (1933). pp. 110–11)

The super-ego reflects the internalization of cultural rules, mainly taught by parents applying their guidance and influence. Freud developed his concept of the superego from an earlier combination of the ego ideal and the "special psychological agency which performs the task of seeing that narcissistic satisfaction from the ego ideal is ensured...what we call our 'conscience'." (Freud, *On Meta-psychology* pp. 89-90.) The superego aims for perfection. It forms the organized part of the personality structure, mainly but not entirely unconscious, that includes the individual's ego ideals, spiritual goals, and the psychic agency (commonly called "conscience") that criticizes and prohibits their drives, fantasies, feelings, and actions. The superego works in contradiction to the id. It strives to act in a socially appropriate manner, whereas the id just wants instant self-gratification. The super-ego controls our sense of right and wrong and guilt. It helps us fit into society by getting us to act in socially acceptable ways. The superego's demands often oppose the id's, so the ego sometimes has a hard time in reconciling the two.

Only when the id, the ego and the superego are in a harmony state can the individual be in a balance condition. Therefore, an individual can realize the value of life. While, when the id, the ego and the superego are in a discordant and unbalanced state, the personality is not perfect and abnormal. At last, various mental problems probably occurs, resulting in abnormal behavior and even making someone insanitary that is quite dangerous to society.

The Superego of Mabel and Fergusson

Mabel lives in an indifferent family, in which her brothers all take a cold attitude toward her. Their spirit is sterile and emotion is restrained. As a girl with strong sense of family responsibility, she still takes good care of her families regardless of their bad deeds and attitudes. This shows that her superego dominates her so that she lives a restrict life with many moral principles. Fergusson, however, as a doctor, always maintains his rationality and restrains his sexual desire and instinct. He saves Mabel because he is a doctor whose prior responsibility is saving people. His id is suppressed by his ethnic and professional principles. When Mabel expresses her love to him, he is tortured by his loss of glory as a doctor. He even feels averse to her intimate behavior because he is controlled by his superego.

## 2. THE EGO OF MABEL AND FERGUSSON

Mabel's father, Joseph, is a horse dealer. When her father is alive, she lives a comfortable life in a happy family with great scenery and servants. However, the death of Joseph leaves his children with unclear debts.

Facing the depressed family situation, Mabel's brothers are vulgar, egoistic, indifferent, only making their way to life. At the same time, they treat Mabel as a beast, and try to drive Mabel away. No one is willing to help Mabel. There is no love and warmth in Mabel's family. She is lonely and hopeless. Due to the restriction of social morality and family responsibility, Mabel has long suppressed her desire and neglected her emotional needs, that is, "Id" is suppressed. She continues to work hard for this family day and night to take care of the daily life of the elder brothers, that is, "self" completely dominates her. Sense of family responsibility and conscience, that is, "super ego" is watching her behavior. At this point, her id, ego, and super-ego are basically in a state of harmony and coordination. Mabel is still busy all day with family affairs, repeating the monotonous and boring life, restraining her emotional needs, dedicating her youth to this family. Family fragmentation and brother's relentless attitudes make Mabel feel depressed and helpless as well. She couldn't find any favor but seek for comfort by visiting her mother's grave, where she feels closely connected with her mother, no longer lonely. She believes that "the world here lived, far better than the death realm inherited from the mother of the truth." Since then, the power of "id" in her personality, that is, the deep loneliness of her heart, is becoming stronger and stronger, but it is still subject to ego and superego. Therefore, Mabel's id can neither adhere to the ego nor be the moral constraint of a woman. Her later suicide can be seen as the imbalance of id.

Fergusson, a young doctor, lives alone in this strange town. He is busy with daily life-and-death rescue between miners and villagers. He works hard, repeating the boring daily routine day after day. The heavy workload often makes him tired. He feels no warmth and comfort. Because of the combined effect that his current living environment—id, his noble professional ethics—superego and his depressed feelings of loneliness—the ego are suppressed, he proactively integrates himself into the life of the locals, from which to get the passion and joy of life. Doctor Fergusson, "approaching and going deep into the lives of men and women who are crude, insincere but not emotionally rich," he feels, "that this contact with a crude, affectionate person is a direct application to his nerves Stickers stimulant ". The id, ego and superego in his personality are apparently in a state of harmony. At this moment, ego completely dominates him. He is full of confidence and finds his life meaningful. Besides, Fergusson has a good friendship with villagers and a friend of one of Mabel's brothers as well, so, he often goes to Mabel's house and greets Mabel kindly out of courtesy. Mabel also serves him as polite as guests. There is no love between them, in other words, they only know each other, and perhaps they are considered as acquaintances. However, when he feels that Mabel's

behavior is unusual, his ego is going to make choices between loneliness and a relationship with Mabel. It occurs to him that it is a dark, depressed, cold evening when Mabel commits suicide. The feeling of the weather is like his feeling when he is alone. At that night, he sees a shadow moving and blocking his view, but he is able to see her. He watches her not dare to let her disappear from her sight. He is desperate to save Mabel even in the situation he can't swim. In the conflict between the id and the superego, the balance of ego tilts the id.

### 3. THE ID OF MABLE AND FERGUSSON

Freud considers id as a complex condition. It is a boiling cauldron with instinct and desire. Happiness is its principle and it is eager to find vent to meet needs and desire.

Mabel has been living in a merciless family after her father died, resulting in her poor spiritual life. What's more her brothers are rude to her. Although Mable takes care of her family and keeps everything in order, the power of her id is becoming stronger and stronger. Her id is going to defend ego and super-ego and decides Mabel's behavior. Encountered with the rude reality, she has lost confidence and hope for future life. She has decided to die and put an end to everything. When she drowns herself to suicide, she has been found by a country doctor and has been saved by him accidentally. When Mabel realized she isn't dead, she couldn't restrain her desire any more. Ego and superego have no use. She gives up ethnic principles that she holds for her whole life. After waking up, she asks a series of strange questions, like whether the doctor loves her or not. She also has many strange behaviors "She shuffled forward on her knees, and put her arms round him, round his legs, as he stood there, pressing her breasts against his knees and thighs, clutching him with strange, convulsive certainty, pressing his thighs against her, drawing him to her face, her throat, as she looked up at him with flaring, humble eyes, of transfiguration, triumphant in first possession." (Lawrence 2002) Regardless of traditions and environment, her instinct and impulse fully release. Id controls her completely and conducts her behavior. "'You love me,' she murmured, in strange transport, yearning and triumphant and confident. 'You love me. I know you love me; I know.'" "And she was passionately kissing his knees, through the wet clothing, passionately and indiscriminately kissing his knees, his legs, as if unaware of everything." (Lawrence 2002) This series of words and behaviors describe Mable's feeling that she is eager to love and be loved. After being rescued, she crashes a last strew. The instinctive desire of her personality, id, strongly controls her behavior. She is like an uncivilized animal and has been ruled by id and totally gives up the ego in the real situation and ethnic principle and code of conduct on weekdays.

The doctor Fergusson has no reply for Mable's show of love. In other words, Mable's desire hasn't been

satisfied. So, it becomes stronger. Under the control of instinct, Mable continues to show her love to the doctor. "'You love me,' she repeated, in a murmur of deep, rhapsodic assurance. 'You love me.' Her hands were drawing him, drawing him down to her." (Lawrence, 2002)

Facing Mable's showing love, Fergusson whose emotion depresses begins to wave. In his personality, id and super-ego begin to fight against. It is a dead-end fight, there must be a winner. "He was amazed, bewildered, and afraid. He had never thought of loving her. He had never wanted to love her. When he rescued her and restored her, he was a doctor, and she was a patient." (Lawrence, 2002) Fergusson uses reason and ethnic to control his desire. However, his instinct revolts the depression of id and super-ego. Eventually, id succeeds and Fergusson begins to reply Mable. "He could not bear the touch of her eyes' question upon him." "With an inward groan he gave way, and let his heart yield towards her." "He dropped on his knees and caught her head with his arms and pressed her face against his throat." (Lawrence, 2002) At this moment, two "self" soul uncover in front of each other. Their instinctive desire, the thirst of sex and love, completely rule them. They are lonely and their emotion is depressed. Now their desire totally breaks out. Under the inner instinct, Fergusson begins to show his love to Mable. "He went and bent to kiss her, gently, passionately, with his heart's painful kiss." (Lawrence, 2002) Last, Fergusson proposes to Mable and decides to marry as quickly as they can. "I want you; I want to marry you, we're going to be married, quickly, quickly--to-morrow if I can." (Lawrence, 2002) In this way, Mable and doctor Fergusson get together for their biological instinct and love.

### 4. CONCLUSION

This article analyzes the the development and change of the relationship between the hero and heroine in *The Horse Dealer's Daughter* from the perspective of Freud's Theory of Personality. On the emotional journey of Mabel and Fergusson, the conflicts of the id and superego cause the pain and hesitation, and deepest natural forces in their body, forces of ego, break out ultimately. The outbreak of power of the id brings physical and mental salvation to Mabel and Fergusson so that we can see the bright side of human nature. It can be said that Lawrence expresses his inner desire for redemption and expects to save the world from inner restraint in *The Horse Dealer's Daughter*. In this gloomy society, there is always a beam of light in our hearts, and there is someone who will save us out of the darkness.

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# Backwash of the CET-4 Listening Test on Viewing, Listening and Speaking Book: A Case Study of New Horizon College English Listening and Speaking Book (3rd Ed.)

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**Abstract:** Based on the theory of Bachman and Palmer's task characteristics framework and the principles of Cunningsworth' teaching materials evaluation, this paper analyzes the content validity of the listening tests in CET-4 (December 2018--September 2020) and the washback effect of it. The results show that the listening tests generally conform to the stipulations and possess a relatively satisfactory content validity, but do not have strong washback effect on the textbook compilation. Then some suggestions are put forward to improve the future compilation of listening textbooks.

**Keywords:** listening test; CET-4; content validity; washback effect; textbook compilation

## 1. INTRODUCTION

CET-4 is a large-scale standardized test implemented by the Ministry of Education. The purpose is to objectively and accurately measure students' English application ability, promote the implementation of College English syllabus, promote the teaching reform of the College English course, and serve to improve its teaching quality and the students' language level. Since its implementation in 1987, CET-4 has gone through over 30 years, during which it has undergone many reforms to meet the needs of China's economic and cultural development.

With the rapid economic development in recent years, China has developed into the second economy in the world. In order to adapt to the development of the new situation and the changes in the demand of college students' English listening ability, the National College English Examination Committee of CET4 and CET6 has made partial adjustments to the listening questions of CET4 since June 2016. 1) The test time has been changed from 35 minutes to 25 minutes; 2) Delete short dialogue and compound dictation; 3) Add short news. From the form of this reform, it can be seen that the national requirements for college students' English ability are gradually improving, especially for the listening ability. Then, after the reform of CET-4, there is a backwash effect on College English listening teaching. As the core of curriculum teaching, teaching materials are the

carrier of knowledge and cultural communication. It determines the specific content and form of teaching and is an important guarantee of teaching effect. Therefore, the influence of CET-4 on teaching is also reflected in the design, arrangement and use of teaching materials.[1] Therefore, this study bases on Bachman and Palmer's task characteristics framework and Cunningsworth's foreign language textbook evaluation principles, according to the requirements of College English Teaching Guide(2017 Version) and College English Testing Syllabus(2016 Revised Edition), analyzes the content validity of CET-4 listening test and its backwash effect on the compilation of New Horizon College English Viewing, Listening and Speaking book(Third Edition) from two aspects: characteristics of the input and characteristics of the expected response.

Backwash effect refers to the impact a test itself (including the principle, scope, difficulty, test environment, answer requirements and statistical analysis of the test) "may have on learners and teachers, on educational systems in general, and on society at large".[2] Any test will have two different backwash effects on teaching, one is a positive and beneficial promotion of teaching, and the other is a negative or even harmful backwash on teaching.[3] The backwash effect of testing on teaching can be divided into positive and negative, overt and covert. [4] Hughes' PPP effect model believes that testing has a direct impact on participants, process and products in teaching.[5]

## 2. THEORITICAL BASES

Bachman and Palmer's task characteristics framework includes five aspects: Characteristics of the setting, Characteristics of the test rubrics, Characteristics of the input, Characteristics of the expected response and Relationship between the input and the expected response.[6] Among these five aspects, characteristics of the input and characteristics of the expected answer are related to the content of the textbooks. Among them, characteristics of the input include topic area, genre, length, readability and speaking speed of the article selected, and characteristics of the expected response include response type and

language skill coverage. As far as characteristics of the input are concerned, the Testing Syllabus states that the selection principles of listening materials include: 1) healthy content and wide range of topics, covering the fields of humanities, social science, natural science, and so on; 2) various genres, including narrative, expository and argumentative texts. (3) speaking speed of listening materials is

between 120 and 140 words per minute.[7] Readability refers to the degree of difficulty of the texts to be read and understood. This study uses the options in the spelling and grammar functions of Microsoft Office Word to calculate the readability of texts (Flesch Reading Ease). The readability index is generally between 0 and 100. The larger the value, the easier the text is (See Table 1).

Table 1: The Flesch Readability Yardstick

Score	Description of style	Typical magazine	Potential readers	
			School grade	% of US adults
0-30	Very difficult	Scientific	College	4.5%
30-50	Difficult	Academic	High School	24%
50-60	Fairly difficult	Quality	Some high school	40%
60-70	Standard	Digest	7th or 8th grade	75%
70-80	Fairly easy	Slick-fiction	6th grade	80%
80-90	Easy	Puff-fiction	5th grade	86%
90-100	Very easy	Comics	4th grade	90%

In terms of characteristics of the expected responses, question type of listening comprehension is multiple-choice question, which mainly assesses students' ability to obtain oral information, including understanding the main idea, important facts and details, implied meaning, judging the communicative function of the texts, the speaker's point of view and attitude, etc. [7]

Cunningsworth believes that scientific and effective teaching materials must meet the following requirements: 1. Teaching materials should meet the needs of learners and be consistent with the objectives of the Teaching Guide; 2. Teaching materials should reflect the current or future use of the language learners have learned; 3. Teaching materials should consider students', as learners, needs and contribute to their learning process; 4. Teaching materials should play an obvious role as learning supporters, just like teachers. Teaching materials should be the medium between the target language and learners. [8]

### 3. FINDINGS AND DISCUSSIONS

The reform of CET-4 and the adjustment of test content will inevitably have a certain backwash effect on the textbooks and teaching contents. The textbooks must be revised according to the reform content of the test; otherwise, no one or no school will choose a textbook which is inconsistent with the test content. Then, has the CET-4 reform had a backwash effect on the revision of the New Horizons College English Viewing, Listening and Speaking Book (3rd Edition)?

This study compares the five testing papers of CET-4 listening tests (December 2018-- September 2020) with the listening part in New Horizons College

English Viewing, Listening and Speaking Book (Third Edition) of characteristics of the input and characteristics of the expected response, analyzes the content validity of the CET-4 listening test and its backwash effect on the compilation and revision of the listening part in New Horizons College English Viewing, Listening and Speaking Book (3rd Edition). According to the compilation instructions of New Horizons College English Viewing, Listening and Speaking Book (3rd Edition) and considering the difficulty of CET-4, this study selects Book 4 to compare with the content of CET-4.

#### 3.1 Characteristics of the Input

##### 1) Topic Area

There are three sections in CET-4 listening test, including three news reports in Section A, two long conversations in Section B and three passages in Section C. Table 2 shows the topic distribution of the five testing papers of CET-4 listening tests (December 2018--September 2020).

Table 2 Topic Distribution of CET-4 and Book 4

	Humanities	Social Science	Natural Science	Daily Life
2018.12	1	4	2	1
2019.06	1	4	2	1
2019.12	2	3	2	1
2020.07	3	2	2	1
2020.09	2	1	3	2
CET-4	9 (22.5%)	14 (35%)	11 (27.5%)	6 (15%)
Book 4	6 (25%)	12 (50%)	1 (4%)	5 (21%)

Viewed from the above table, topics of CET-4 listening tests, from December 2018 to September

2020, are various, covering all the topics required in the Testing Syllabus. In terms of each testing paper, except testing paper 2020.09, where passage on social science is less- only one passage, and passages on natural science are relatively too many- 3 passages, the other testing papers have reasonable topic distribution. In terms of topic area, the amount of humanities passages is increasing these years, which may be in line with the situation that today's society pays more and more attention to humanistic care, thus topics about humanities increase. In short, topic of these five testing papers of CET-4 listening test meets the requirements of the Teaching Guide and the Testing Syllabus. It has high content validity, and is also conducive to the test taker's comprehension of the listening materials.

Also it can be seen from the above data, Viewing, Listening and Speaking Book 4, like CET-4 listening test, has a wide range of topic areas and covers all kinds of topics required. However, the proportions of their topics in CET-4 and in Book 4 are different. Social science accounted for 35% in CET-4, but as high as 50% in Book 4. Natural science accounted for 27.5% in CET-4 but 4% in Book 4. There is only one passage of natural science, of all the 24 passages in eight units. Purposes of test and textbook compilation are different. Test pays attention to application and discipline balance in order to assess students' learning effect; textbook pays attention to information and fun in order to better attract students' interest to learn. However, how to balance the topics and make the topic distribution more reasonable and scientific is worthy of the research and thinking of textbook writers and teachers, otherwise it will affect students' learning effects and performance.

## 2) Genre

The Testing Syllabus requires that CET-4 include a variety of genres, including narration, exposition and argumentation. Since news reports and long conversations do not involve genre, only the genre of passages is discussed here. As can be seen from table 3, the passages in the listening test basically include the genres required by the Testing Syllabus. The genre of argumentation tops the other two genres, accounting for 53.3%; the genres of exposition and narration account for 26.7% and 20% respectively. Viewed from a single testing paper, testing papers June 2019 and September 2020 both completely cover three different genres, and the other three testing papers have two argumentative passages and one expository or narrative passage each. Considering characteristics of argumentative passages, such as clear view point, rigorous structure and objective demonstration, it is conducive to test takers' understanding and accessing to information needed, and better achieve the purpose of testing. Therefore, it is appropriate and reasonable that the proportion of argumentation takes up about 50% of all the genres. On the other hand, due to the diversity of contents

and the complexity of the relationship between text units, expository passage is not conducive to the test takers to obtain all the required information; while it is helpful to distinguish test takers' comprehensive language ability. In general, as a test to assess whether the students' listening ability meets the needs of life and work-related information communication, the genre in these five CET-4 listening test meets the relevant requirements in the Testing Syllabus and has high content validity.

Table 3 Genre Distribution

	Narration	Exposition	Argumentation
2018.12	0	1	2
2019.06	1	1	1
2019.12	0	1	2
2020.07	1	0	2
2020.09	1	1	1
Mean:	20%	26.7%	53.3%

In Viewing, Listening and Speaking Book 4, there are eight units. The listening part of each unit is divided into three sections, and each section corresponds to that of the CET4 listening test. Each section contains a report, long conversation, interview or passage. Among the 24 texts in the whole book, only the third section of Unit 1 is the narration, and the rest are interviews or long conversations. Therefore, in terms of genre, it shows that CET4 has no impact on the compilation of the listening part of the textbook and almost has no backwash effect. The conversations or interviews in the textbook may better catch students' attention than passages. However, if the diversity of genres is sacrificed, students will not be able to get more access to the narrative, expository and argumentative passages required in the Testing Syllabus in their daily study. Whether it will have a great impact on the teaching effect, teachers' teaching and students' learning is worthy of further consideration and research by the textbook writers.

## 3) Readability

Readability refers to the degree of difficulty of the texts to be read and understood. Study on readability is of great significance for the design of test text, the compilation of textbooks and the evaluation of text materials. It is mentioned in the Testing Syllabus that students should be able to basically understand medium difficulty oral or written materials. Therefore, this study uses Microsoft Office Word to calculate the readability of the five CET-4 listening test (December 2018--September 2020) (See Table 4).

Table 4 Readability of the Short Passages

	Passage 1	Passage 2	Passage 3	Mean :
2018.12	31.5	69.1	72.3	57.6
2019.06	64.9	72.9	74.6	70.8
2019.12	43.4	68.5	61.7	57.9
2020.07	61.9	82.1	39.3	61.1
2020.09	74.3	74.7	59.1	69.4

It can be seen from the above data that the readability

of the 15 short passages in the five CET-4 listening tests is between 31.5 and 82.1. The average readability of each listening test is relatively stable, ranging from 57.6 to 70.8. According to the Flesch readability Yardstick (Table 1), the readability between 50 and 70 is fairly difficult and standard, which is consistent with the "oral expression information of medium difficulty".[7]

In Viewing, Listening and Speaking Book 4, only the one narrative passage in Unit 1 involved in readability. Microsoft Office Word is used to detect the readability of this passage, which is 64.5. According to the data in Table 4, the readability of the short passages in CET4 is between 57.6 and 70.8. So the readability of this passage in Viewing, Listening and Speaking Book 4 and the short passages of CET4 listening tests are at the same level, belonging to "medium difficulty". Since the sample size in Book 4 is too small and the result lacks objectivity, it is impossible to analyze the overall readability of Viewing, Listening and Speaking Book 4. Generally speaking, the readability of the CET-4 listening test and the listening part of Viewing, Listening and Speaking Book 4 are in line with the requirements of Teaching Guide and the Testing Syllabus.

#### 4) Length

Test takers will be definitely affected if the listening materials are too long, due to the limitation of people's focus time. Although the Teaching Guide does not clearly describe the length of listening materials, the Testing Syllabus stipulates that there are three news reports with a total of 450-500 words, two long conversations with 240-280 words each and three short passages with 220-240 words each. Show in Table 5, the lengths of news reports of CET-4 from December 2018 to September 2020 are 508, 461, 501, 554 and 545 words respectively. Among them, only the length of the news reports of June 2019 meets the 450-500 words stipulated in the Testing Syllabus, the others exceed the upper limit of 500 words. Therefore, the length of the selected news reports of CET-4 listening test is inconsistent with the requirements of the Testing Syllabus, and the content validity is low. The lengths of the long conversations are between 241 and 289 words, which is basically consistent with the requirements of the Testing Syllabus, and the content validity is high. The length of the second short passage of July 2020 is 272 words, which seriously deviates from the specified 220-240 words. The other 14 are mainly between 220 and 240 words, which basically meets the requirements of the Testing Syllabus.

Table 5 Length of the Listening Test

	News reports	Conversations		Passages		
		1	2	1	2	3
2018.12	508	283	273	232	232	235
2019.06	461	241	244	241	229	230
2019.12	501	246	289	241	249	246
2020.07	554	287	255	240	272	242
2020.09	545	277	264	240	230	248

Table 6 Length of Listening Materials in Book 4

	Pt. 1	Pt. 2	Pt. 3
Unit 1	591	501	485
Unit 2	592	413	371
Unit 3	582	454	524
Unit 4	577	448	334
Unit 5	562	464	533
Unit 6	604	427	587
Unit 7	497	638	718
Unit 8	561	490	351

The Teaching Guide does not specify the length of texts in textbooks. Compared the length of each part of Book 4 with the stipulated passage length in the Testing Syllabus, the total lengths of the first and second parts of Book 4 are slightly higher than the amount of words stipulated in the Testing Syllabus. In daily learning, it is more suitable to adopt passages that are slightly longer than the required length, which is more conducive to students' learning and language ability cultivation. The Testing Syllabus stipulates that CET-4 listening test include three short passages, 220-240 words each passage; while the Viewing, Listening and Speaking Book 4 only

arranges one piece of listening material in the third part of listening, so the total length does not meet that required. In addition, the length of a single text in Book 4 has far exceeded required 220-240 words in the Testing Syllabus. Therefore, whether the length of listening materials in the Viewing, Listening and Speaking Book 4 should more clearly reflect the C requirements needs further demonstration and revision by the textbook compilation members.

#### 5) Speed

The Testing Syllabus stipulates that the speaking speed should be between 120 and 140 words per minute. The speed analyzed here is the average speed

of the three sections, including news report, long conversation and short passages, but excluding their questions. The speed of CET-4 listening tests from December 2018 to September 2020 has remained relatively fast (See Table 7). Except that the speaking speeds of the listening test of June 2019 and December 2019 are 133.6 words and 131.26 words, which are appropriate and within the stipulated range,

Table 7 Speed of Input Materials

CET-4	2018.12	2019.06	2019.12	2020.07	2020.09			
	142.41	133.6	131.26	148.03	146.07			
Book 4	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
	172	155	170	157	182	184	190	159

The speed of listening materials in the Viewing, Listening and Speaking Book 4 is between 155 and 190 words per minute. Considering the fundamental goal and the improvement goal of the Teaching Guide are "being able to understand slow English audio and video materials" and "...medium-speed English radio, television programs and other audio and video materials", it shows that the Teaching Guide has little impact on Viewing, Listening and Speaking Book 4. The requirements of "120-140 words per minute" in the Testing Syllabus and the recent CET-4 listening tests have no backwash effect on the compilation of the textbook. Generally speaking, the ordinary English speaking speed is 125-150 words/min. This is recognized not only by IELTS, but also by ETS TOEFL.[9] News broadcasting with a speed of 170 words per minute is above medium difficulty, and it is aimed at local residents of English-speaking countries. Five of the eight units in Book 4 speak at a speed of more than 170 words per minute. How to adjust the speaking speed of listening materials more reasonably and scientifically is worthy of further research. All in all, the objective of textbook compilation is to make textbooks better serve the teaching and the students' learning.

### 3.2 Characteristics of the Expected Response

Expected response includes response type and listening skill coverage.

There is only multiple-choice question in CET-4 listening test, testing test takers' understanding of listening materials. However, it is not conducive to the application of students' listening skills and the cultivation of students' productive skills. The Teaching Guide requires "cultivating students' comprehensive English application ability". The Viewing, Listening and Speaking Book of New Horizon College English (Third Edition) pays attention to the combination of single skill training and comprehensive skill training, and pays attention to the cultivation of productive skills. On the basis of single skill practice, the response types of comprehensive ability training are added, such as chart filling and notetaking. The training and cultivation of multi skills not only avoid the boredom of students' usual single skill training, but also is helpful for students' performance in CET-4 in the

the speaking speeds of the other three listening tests are 142.41, 148.03 and 146.07 words respectively, which exceed the stipulated 120-140 words per minute. It can be concluded that the speaking speed of the five listening test is too fast and does not comply with the relevant requirements of the Teaching Guide and the Testing Syllabus. The content validity of speed is not high.

future.

The National College English Test Committee has made partial adjustments to the listening test of CET-4 and CET-6 since June 2016. The adjusted CET-4 listening test more comprehensively tests students' listening skills. In addition to the understanding of explicit and implicit information, it also pays attention to the use of language characteristics and listening strategies to understand listening materials. The Viewing, Listening and Speaking Book of New Horizon College English (Third Edition) highlights the training of listening skills, and the exercise design is more targeted and scientific. For example, putting the explanation of listening skills before listening skills training and allowing students to directly carry out practical training after learning listening skills will not only help students understand and consolidate the learned listening skills, but also make the practice more targeted, to achieve the preset goals and effects.

### 4. CONCLUSION AND SUGGESTIONS

Since its establishment, CET-4 has played an inestimable role in improving the quality of College English Teaching in China. With the development of the new social situation and the current changes in the demand for college students' comprehensive English ability, the reform of CET4 is also constantly improving.

The study on the content validity of recent years' CET-4 listening test shows that the listening test has high content validity in characteristics of the input and characteristics of the expected response, which is consistent with the requirements of the Teaching Guide and the Testing Syllabus. The topic area, genre, readability and listening skills coverage are consistent with the Testing Syllabus. There is still a certain gap between the length and speed of listening materials in CET-4 and the requirements of the Testing Syllabus, which needs to be improved.

The reform of listening test has a backwash effect on the compilation and revision of New Horizon College English Viewing, Listening and Speaking Book, especially on response type design and skill coverage. Based on the analysis of the input and expected response, this paper puts forward the following suggestions on the content validity of CET-4 listening

test and the revision of New Horizon College English Viewing, Listening and Speaking Book: 1. While maintaining the proper quota of argumentation, CET-4 listening test can appropriately add narration and exposition; 2. The length of news reports and short passages should be appropriately reduced, in this way the speaking speed of the listening test can also be reduced, so that CET-4 listening test can better meet the requirements of the Test Syllabus; 3. Textbook compilation members should adjust the topic area of the listening materials of New Horizon College English Viewing, Listening and Speaking Book and add more texts of natural science. 4. The editors should revise the genre of the third part of the listening, scientifically plan and reasonably allocate the proportion of argumentation, exposition and argumentation based on the specific requirements of the Teaching Guide and the Testing Syllabus and actual situation, pay attention to the interest and practicability of the content of the teaching materials, and consider the applicability of the genre, so that students can apply what they have learned to practice; 5. Due to the limitations of the textbook, it is impossible to better assess the readability of the texts in textbook. It is hoped that the editors can give good consideration to the readability of the selected texts in the future, so as to make it highly consistent with the requirements of the Testing Syllabus. 6. Revise the length and speed of listening materials in the textbook to make them more in line with the requirements of the Teaching Guide and the Testing Syllabus, and it is also more conducive to the focus of students' attention.

Although New Horizon College English Viewing, Listening and Speaking Book (Third Edition) has been further revised and improved in text selection and response type design compared with the previous

edition, no textbook can be perfect, and no textbook can be completely suitable for students at different levels in different regions. [8] When using the textbooks, teachers can appropriately delete and supplement the teaching materials according to the actual teaching situation, so that they can better achieve the expected teaching effect and meet the learning needs of students.

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# Development Strategy of Smart Agricultural Cold Chain Logistics from the Perspective of Supply Chain

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**Abstract:** with the continuous emergence of new technologies such as information technology, artificial intelligence and automation equipment, as well as new formats such as new retail, the development prospect of smart agricultural cold chain logistics industry is bright. However, due to the characteristics of agricultural cold chain logistics industry, only from the technical level can not completely solve the problems of low efficiency of information sharing and uncoordinated supply chain caused by enterprises maximizing their own interests in the cold chain logistics system. Based on this, by analyzing the development of intelligent cold chain logistics in China, this paper puts forward the existing problems of intelligent cold chain logistics of agricultural products, including agricultural cold chain system management coordination and supply chain risk. Finally, in order to improve the competitiveness of the whole agricultural cold chain system, supply chain members should establish a strategic partnership and build an information sharing mechanism with the help of intelligent logistics technology, so as to realize the coordinated operation of the supply chain. At the same time, through the application of intelligent logistics technology, establish risk emergency and prevention mechanism, intelligently identify and avoid the risks of agricultural cold chain supply chain, and ensure the coordinated development of supply chain node enterprises, so as to promote the healthy development of agricultural products industry.

**Key words:** cold chain logistics smart logistics agricultural products supply chain

## 1. Introduction

The cold chain logistics of agricultural products in China started relatively late. The domestic cold chain operation was first produced in the foreign trade export of meat food in the 1950s. With the improvement of economic development level and the change of people's consumption concept, the demand and supply of domestic cold chain logistics market have increased significantly. However, according to the market research and investment forecast analysis report of China's cold chain logistics industry from 2013 to 2017, the application rate of China's comprehensive cold chain is only 19%, the cold chain

circulation rates of fruits and vegetables, meat and aquatic products are 5%, 15% and 23% respectively, and the refrigerated transportation rates are 15%, 30% and 40% respectively. The corrosion rate of products is high, and only fruits, vegetables and other agricultural products are re picked, transported. The loss of logistics links such as storage is 25% - 30%. About 130 million tons of vegetables and 12 million tons of fruits are lost in transportation every year. About 90% of meat, 80% of fish, many milk and bean products are basically circulated and processed at room temperature. Even the products in the cold chain are "broken chain" in the process of entering the market from the origin for retail.

In recent years, with the deep integration of new technologies such as information technology, artificial intelligence and automation equipment with the development of cold chain logistics industry and the continuous emergence of new formats such as new retail, the development prospect of smart agricultural cold chain logistics industry is bright. As an emerging model generated by the combination of traditional logistics industry and big data analysis, artificial intelligence and other technologies, smart logistics has its own professional logistics solutions such as automation and mechanization brought by new technology, which plays an important role in solving the inefficient operation of traditional logistics models. However, due to the lack of synergy among agricultural product supply chain enterprises, supported by new technology, it can only solve the problem of low efficiency of information sharing from the technical level, and can not directly solve the problem of supply chain disharmony caused by enterprises taking the maximization of their own interests as the starting point in the operation of agricultural product supply chain. Therefore, using the information sharing and other solutions brought by intelligent logistics technology to straighten out its supply chain relationship has a certain research value to solve the low operation efficiency of agricultural product supply chain.

## 2. Research review

### 2.1 overview of research on cold chain logistics of agricultural products

Cold chain logistics of agricultural products is a supply chain network including precooling,

refrigerated vehicle transportation, cold storage, distribution and retail. Cold chain logistics of agricultural products is a diversified, multi-level and multi-functional factor system engineering. Various elements restrict and support each other to form a supply chain structure echoing each other, so as to form a cold chain logistics industry chain (Ding Junfa, 2010; Wang Zhitai, 2010). The key to the construction of cold chain logistics system lies in the "chain". Only when fresh agricultural products maintain a standard temperature control environment in all links of logistics can the quality and safety of agricultural products be guaranteed to the greatest extent, so as to reduce losses (Wang Xuhui and Zhang Qilin, 2015). With the improvement of people's living standards and the growth of large-scale long-distance distribution of agricultural products, the cold chain logistics of agricultural products has developed rapidly (yuan XueGuo et al., 2015). In particular, the rapid development of e-commerce strongly highlights the importance of cold chain logistics (Chen Jingyu et al., 2015). However, the backward infrastructure construction of cold chain logistics of fresh agricultural products has led to the increase of farmers' production without increasing their income, resulting in the weak supervision of food safety of agricultural products, serious loss and waste in circulation links, the increase of the total cost of agricultural products and the rise of prices. Therefore, it is necessary to vigorously develop cold chain products (song Ze, 2015)

From the current research on cold chain logistics of agricultural products at home and abroad, there are more research at the macro level, mostly focusing on qualitative research such as problem analysis and countermeasure discussion, and quantitative research mostly involves logistics location, distribution path algorithm and so on. On the whole, the research on the characteristics of cold chain logistics is not deep enough, especially the research on the economic characteristics of China's "large country and small farmers" under the special national conditions, and the real dilemma of cold chain logistics is not systematically analyzed. Therefore, it leads to the current situation of "different words and different opinions" in the research of cold chain logistics.

### 2.2 overview of smart logistics research

Intelligent logistics refers to the effective integration and application of Internet of things technology, big data mining and analysis technology, perception and identification technology, remote monitoring technology and artificial intelligence technology to all links and subjects of logistics activities. It is an efficient logistics system with the ability of thinking, perception, learning, reasoning and judgment and self-solving. Through advanced Internet of things technology, integrate the social resources of transportation, warehousing, distribution, freight

forwarding and other links of the logistics industry to realize the intelligent, automatic and information-based operation and management of the logistics industry. At present, China's intelligent logistics is still in the primary development stage, and there are few relevant studies.

Most studies focus on combing the development status, existing problems and Countermeasures of smart logistics in China; Some scholars also conduct research from the specific level of intelligent logistics in logistics operation, such as the research on intelligent logistics warehousing system in the Internet of things (Huang Zhiyu, 2011) and the design and implementation of intelligent logistics distribution system based on the Internet of things (Chen Fengzhao, 2011); Analysis of online shopping terminal logistics application based on Intelligent express cabinet mode (Wang Jiaqi, 2015), construction of information platform of smart logistics park based on big data (Shi Rongli, 2016), etc.

### 2.3 overview of cold chain logistics research from the perspective of supply chain

From the perspective of supply chain, the research on cold chain logistics mainly focuses on the qualitative research on the development problems of intelligent logistics supply chain and the mode of intelligent logistics supply chain (Luo Yonghong et al., 2019); By constructing different types of supply chain organization models, this paper studies the impact of relationship contract on the freshness of agricultural products and supply chain profits (Xiong Feng et al., 2015); Agricultural product ordering strategy under the integrated inventory model of one manufacturer, multiple distributors and multiple retailers (Wang Shuyun, 2016).

By combing the literature, it is found that the research on cold chain logistics from the perspective of supply chain is mostly in-depth research from the perspective of micro profit distribution and ordering strategy. Based on this, this paper intends to study the problems and Countermeasures in the development of smart agricultural cold chain logistics from the perspective of supply chain.

## 3. Current situation and existing problems of intelligent cold chain logistics of agricultural products

### 3.1 Development status of intelligent cold chain logistics of agricultural products

Using information technology to make equipment and control intelligent and replace the new mode of human logistics and supply chain management plays an important role in greatly improving efficiency, reducing costs and enhancing consumer experience. Its rapid development is closely related to emerging technologies such as Internet of things (IOT), cloud computing, big data and artificial intelligence (AI). The Internet of things is an information carrier based on the Internet and traditional telecommunication

networks, which enables all ordinary physical objects that can be independently addressed to realize interconnection. The application scenarios of the Internet of things in the intelligent cold chain logistics of agricultural products mainly include vehicle scheduling, cargo tracing, whole process cold chain, safe driving, supply chain coordination and so on. Cloud computing is a changing and dynamic computer service system, which can deploy and distribute data and logistics data according to certain requirements, realize the effective management of information resources through high-performance and high-capacity cloud storage system, and improve the ability of enterprise logistics system to think, perceive, learn, analyze decision-making and intelligent execution. Big data can be used for the collection, analysis and business application of agricultural product logistics and business flow data. The application scenarios include agricultural product logistics demand prediction, whole process visualization of agricultural product logistics, vehicle intelligent scheduling, etc. At present, the mature application of artificial intelligence is image recognition. The application scenarios include intelligent operation rule management, warehouse location, decision assistance, image recognition and intelligent scheduling.

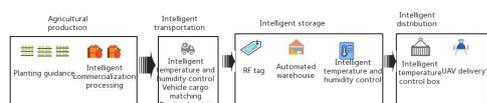


Figure 1 Application framework of intelligent cold chain logistics of agricultural products

Smart cold chain logistics of agricultural products involves many enterprises from agricultural product production, smart cold chain transportation, smart cold chain warehousing and smart cold chain distribution. The 21st century is a competition between supply chains. If enterprises want to win customers and seize business opportunities, they must be able to better integrate all links in the supply chain network, optimize operation processes and improve efficiency. At the front end of the agricultural product supply chain, we can use big data and design different models for demand forecasting. We can predict the consumption trend based on the analysis of industry, partners and their own data, so as to determine the variety and quantity of purchased agricultural products; Then drive the whole supply chain based on demand forecast: that is, plant farmers according to the big data analysis results, and provide intelligent commercialization treatment schemes (including precooling mode, precooling time, packaging treatment, etc.) according to the origin and variety of agricultural products after harvest; Formulate intelligent cold chain transportation scheme, including intelligent temperature and humidity control, vehicle cargo matching and

automatic route planning; Formulate smart storage scheme, including the use of RF tags and automatic three-dimensional storage to realize automatic warehouse in and warehouse out, warehouse transfer, inventory and other warehouse operations, and configure intelligent temperature and humidity control system to ensure continuous cold chain in the whole process; Formulate intelligent cold chain distribution scheme, including the use of intelligent temperature control box and UAV automatic delivery.

3.2 problems in intelligent cold chain logistics of agricultural products

(1) There are many enterprises involved in the cold chain of agricultural products, and it is difficult to manage and coordinate

Due to the large number of node enterprises, scattered distribution and chaotic management, the management and coordination of supply chain business flow and logistics is difficult, which has a great impact on the overall performance of the cold chain. The function of cold chain supply chain management can not be realized by administrative means, because there is no subordinate relationship between enterprises. At the same time, the smart cold chain needs to invest a lot of people, money and materials to complete the configuration of basic smart logistics facilities, equipment and computer-aided equipment, which makes the coordination of the cold chain supply chain more difficult.

(2) The composition of agricultural cold chain is complex, the vulnerability of supply chain is high, and there are many risk events in supply chain

There are a lot of uncertainties in the market faced by the agricultural product supply chain, including risks caused by unknown uncertain factors, such as natural disasters, epidemics, political risks, terrorist attacks, etc; There are also risks caused by observable uncertainties, such as market changes, implementation problems, inaccurate demand forecasts, etc. For example, under the influence of the new crown epidemic, the quality and safety of cold chain logistics of fresh products has been questioned. At present, the new crown epidemic has formed an international pandemic and may accompany mankind for a long time in the future. We must think about comprehensively improving the cold chain logistics system in the post epidemic era, building a smart cold chain supply chain, realizing the whole process information monitoring and preventing new crown risks.

4. Development strategy of smart agricultural cold chain logistics from the perspective of supply chain

In order to improve the competitiveness of the whole agricultural cold chain supply chain, supply chain members need to coordinate operation decisions through a certain mechanism. At the same time, through the application of intelligent logistics technology, identify and avoid the risks of agricultural cold chain supply chain, and ensure the

coordinated development of supply chain node enterprises, so as to promote the healthy development of agricultural products industry.

4.1 smart agricultural Cold Chain Supply Chain Coordination Strategy

One of the manifestations of the uncoordinated supply chain of agricultural cold chain is the bullwhip effect. The distortion of agricultural product demand information is mainly due to the transmission of multi-level supply chain demand information. The predicted demand of each node enterprise has become an amplification factor of the ordering decision of upstream node enterprises, and has a cumulative effect. The way to eliminate the distortion of agricultural product demand information is to strengthen information sharing with the help of intelligent cold chain logistics center, so that enterprises in the agricultural product supply chain can arrange production according to the actual needs of the agricultural product market. The establishment and operation of smart cold chain logistics center will inevitably need to invest a lot of human, material and financial resources, which can not be completed by a single enterprise. It needs the node enterprises of the supply chain to form a strategic partnership.

The above agricultural supply chain strategic partnership needs to realize enterprise integration from the macro, meso and micro levels. At the macro level, the strategic cooperation framework is mainly determined by means of principal-agent; At the meso level, various intelligent logistics technologies should be adopted to realize information sharing among cooperative enterprises; At the micro level, we should rely on the established information sharing system and mechanism among supply chain enterprises to realize synchronous and integrated agricultural product production planning, and realize logistics and service cooperation.

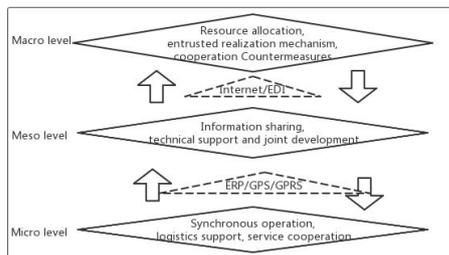


Figure 2 Integration mode of smart cold chain supply chain partnership of agricultural products

4.2 Cold chain risk management strategy of smart agricultural products

For the cold chain supply chain of agricultural products, the risks caused by unknown uncertain factors, such as natural disasters, epidemics, political risks and terrorist attacks, are uncontrollable risks, and an effective risk emergency mechanism should be established; For controllable risks caused by observable uncertainties, such as market changes,

implementation problems, inaccurate demand forecast, etc., a risk prevention mechanism should be established to eliminate possible crises in the bud through big data analysis.

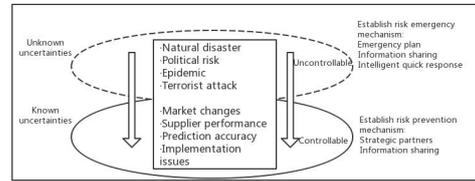


Figure3 Different types of risk management mechanisms

(1) Risk emergency mechanism

Firstly, the risk emergency management of agricultural product supply chain should establish a risk early warning system based on the Internet of things and big data analysis, and build a set of early warning evaluation index system. When more than one index deviates from the normal level and exceeds a certain critical value, the early warning information will be sent out. In addition, after the early warning system gives a warning, the emergency system will deal with the emergency and unexpected events to avoid serious consequences to the enterprise.

(2) Risk prevention mechanism

The risk factors caused by market changes and implementation problems in the cold chain of agricultural products include the low quality and safety awareness of staff and the non-standard work, resulting in food decay; The laws and regulations related to cold chain logistics are not perfect, and the industry norms and constraints are insufficient; The cold chain technology and related infrastructure can not meet the cold chain technical requirements, etc. Therefore, for risk prevention, we can strengthen information communication between enterprises with the help of intelligent logistics technology to form a strategic partnership of cold chain supply chain enterprises. We should use blockchain and other technologies to eliminate information asymmetry as much as possible, and adopt incentive means to eliminate the moral hazard of partners.

5. Conclusion

New technologies such as information technology, artificial intelligence and automation equipment are deeply integrated with the development of cold chain logistics industry, and new formats such as new retail are emerging. The development prospect of smart agricultural cold chain logistics industry is bright. As an emerging model generated by the combination of traditional logistics industry and big data analysis, artificial intelligence and other technologies, smart logistics has its own professional logistics solutions such as automation and mechanization brought by new technology, which plays an important role in solving the inefficient operation of traditional logistics models. However, due to the lack of synergy among agricultural product supply chain enterprises,

supported by new technology, it can only solve the problem of low efficiency of information sharing from the technical level, and can not directly solve the problem of supply chain disharmony caused by enterprises taking the maximization of their own interests as the starting point in the operation of agricultural product supply chain. Based on this, by analyzing the development of smart cold chain logistics in China, this paper puts forward the existing problems of smart cold chain logistics of agricultural products, including many enterprises involved in the cold chain of agricultural products and great difficulty in management and coordination; The composition of agricultural cold chain is complex, the vulnerability of supply chain is high, and there are many risk events in supply chain. Therefore, in order to improve the competitiveness of the whole agricultural cold chain supply chain, supply chain members establish strategic partnerships and build an information sharing mechanism with the help of intelligent logistics technology, so as to realize the coordinated operation of the supply chain. At the same time, through the application of intelligent logistics technology, establish risk emergency and prevention mechanism, intelligently identify and avoid the risks of agricultural cold chain

supply chain, and ensure the coordinated development of supply chain node enterprises, so as to promote the healthy development of agricultural products industry.

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# Difficulties Faced by Commercial Banks in the New Situation of Regulation of Anti-Money Laundering and Suggestions for Countermeasures

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**Abstract:** As the strength, depth and breadth of anti-money laundering continues to strengthen, the regulatory authorities are gradually increasing the penalties for some institutions' inappropriate anti-money laundering work, putting forward higher requirements for banking institutions to do a good job in anti-money laundering. In the process of AML work, the problems faced by commercial banks have also become more complicated. This paper provides an in-depth analysis of the strong anti-money laundering regulatory situation in China in recent years and the difficulties faced by grassroots banks under the strong regulatory situation, and puts forward targeted recommendations to promote the anti-money laundering work of grassroots banks.

**Keywords:** commercial banks, anti-money laundering, supervision

## 1.OVERALL ANTI-MONEY LAUNDERING SITUATION ANALYSIS

In 2019, more than 80% of the branches of the People's Bank implemented the "double penalty system", with penalties significantly stronger than in previous years. From the information on penalties that has been published, a total of 319 obligated institutions were subject to anti-money laundering administrative penalties in 2019, with the amount of penalties hitting a new high again, totalling 172.736 million yuan, an increase of 31.9% over the previous year an increase of 31.9%, with individual penalties totalling RMB9.711 million. A total of 29 provincial regions across the country were subject to AML penalties, and even into 2020, AML penalties remained high. On 14 February 2020, the People's Bank of China announced two 10 million AML fines against Minsheng Bank and Everbright Bank, while a total of 20 people were fined at the two institutions, all of which indicate that the People's Bank's AML supervision will be further increased.

(1)Anti-money laundering penalties show growth

In 2018, the amount of AML penalties imposed by the PBOC was RMB16.31 million in the first quarter, RMB7.97 million in the second quarter, RMB41.56

million in the third quarter and RMB65.58 million in the fourth quarter. 2019 AML penalties amounted to RMB66.45 million in the first quarter, RMB21.94 million in the second quarter, RMB13.56 million in the third quarter and RMB70.79 million in the fourth quarter. Looking at the overall development of penalties in 2019, the four quarters of 2019 showed an overall increase compared to 2018, with the amount of penalties in the first and fourth quarters of 2019 being significantly higher than the second and third quarters, and the amount in the fourth quarter of 2019 was also higher than the highest amount of penalties in 2018, being \$5.71 million higher than the fourth quarter of 2018, in terms of the amount of penalties in 2019, showing a fluctuating trend of high at both ends, comparing with the penalties in 2018, the HCB's anti-money laundering remains high-handed in 2019.

Banking institutions remain the focus of anti-money laundering penalties by the CBI.

As the main obligated institution for anti-money laundering, banks have been the focus of the PBOC's anti-money laundering supervision and are subject to the greatest administrative enforcement. 2019 banking institutions (including credit cooperative unions) were subject to anti-money laundering penalties amounting to RMB 111.59 million, accounting for 64.59% of the total fines of RMB 172.76 million, it can be clearly found that banking institutions are still the focus of the PBOC's anti-money laundering supervision and are also the institutions that need to continuously strengthen management of institutions, but at the same time, the PBOC AML supervision is also gradually increasing the supervision of payment institutions' AML performance, with the largest single penalty being imposed on payment institutions in 2019, and also increasing the supervision of non-bank institutions, such as finance companies and asset management companies, which have also started to be punished.

(3)Analysis of the causes of AML penalties in 2019

In terms of the reasons for AML penalties in 2019, they can be broken down into the following

categories: failure to perform customer identification obligations as required, failure to keep customer identification information and transaction records as required, failure to file large transaction reports or suspicious transaction reports as required and conducting transactions with unidentified customers or opening anonymous accounts or pseudonymous accounts for customers, as well as violating other AML regulations. Of course some new types of penalties also emerged in 2019, mainly: 1. failure to provide data required for on-site inspections in accordance with the standards of (2007) No. 300 "Data Interface Specifications for Anti-Money Laundering On-site Inspections of Banking Financial Institutions (for Trial Implementation)"; 2. failure to take enhanced identification measures for high-risk customers as required; 3. failure to conduct manual analysis, identification and exclusion of a transaction for unreasonable reasons as required .

## 2. THE DIFFICULTIES FACED BY COMMERCIAL BANKS IN ANTI-MONEY LAUNDERING UNDER THE NEW REGULATORY SITUATION

Judging from the development trend of anti-money laundering penalties from 2019 to 2020, the trend of strong supervision and strict penalties will further continue, and with the normalisation and institutionalisation of anti-money laundering enforcement, higher requirements will be put forward for banks to perform their anti-money laundering duties, both in terms of connotation and form, and the new situation, new circumstances and new problems faced in the course of performing anti-money laundering duties will also increase, which further increases at a large level the number of grassroots banks in This has further increased the difficulties faced by grassroots banks in their anti-money laundering work.

The situation of anti-money laundering work has become more and more severe. With the rapid development of technology, money laundering methods have also undergone rapid changes, and with the help of new technology and new platforms, money laundering behaviors have gradually developed to present diverse new forms, making it more difficult to prevent and control money laundering risks, which poses a great challenge to banks' anti-money laundering work. From the perspective of money laundering activities in recent years, money laundering behaviors have become more and more hidden and diversified, putting forward higher requirements for financial institutions' anti-money laundering work, and at the same time, anti-money laundering At the same time, anti-money laundering regulators have gradually increased the intensity of supervision and enforcement of anti-money laundering work of financial institutions, and from the enforcement penalties issued in 2019, it is very obvious that the depth of enforcement and the intensity of fines show a trend of strictness, and huge

fines have been issued to a number of financial institutions, which continue to set new penalty records, putting forward higher standards and requirements for financial institutions to perform their anti-money laundering work, and under the diversification of money laundering behaviours and stricter regulation, the difficulty of anti-money laundering work of grassroots With the diversification of money laundering practices and tighter regulation, the difficulty of anti-money laundering work of grassroots banks has increased rapidly. At the same time, transnational money laundering practices have gradually become more frequent, and the AML personnel of grassroots banks do not have enough international perspective to deal with the obvious deficiencies in the control of new transnational money laundering practices.

The professionalism of the anti-money laundering team needs to be enhanced. In the complex and changing money laundering environment, the effective performance of the AML professional team of banking financial institutions is crucial. One is that the AML professional team of banks, as the backbone of the auxiliary department team, needs to be strengthened, and many banks are slow in replenishing and updating their AML professional team, resulting in the team not being agile enough to change in the face of new money laundering behaviours, which affects the quality and efficiency of AML work. Secondly, with the rapid advancement of Internet finance and technological updates, there is an obvious shortage of traditional AML professional knowledge reserves, and the training system and knowledge update of AML teams in the grassroots banks are still lagging behind to a certain extent, which cannot adapt to the current AML needs and will form certain constraints on the effective performance of AML teams.

There are deficiencies in the integration of anti-money laundering resources. Judging from the integration of existing AML resources, there is still more room for improvement in the integration within and outside the bank. Firstly, from the perspective of external resources, when querying external resources, more reliance is placed on external systems for data query, such as querying information related to enterprises through systems such as Enterprise Search and Tianwei Search, while querying customer IP addresses with the help of internet platforms. The integration of external resources within the bank still needs to be improved, and the current information on industrial and commercial registration, trade import and export information, public security information and tax collection and control information have not yet been shared, affecting Secondly, anti-money laundering data cannot be shared between different financial institutions, and the transfer of funds across financial institutions is often not traceable, which can easily lead to the omission of suspicious transactions

and make the quality of suspicious transaction reports suffer; thirdly, the anti-money laundering work within the bank is affected by different regional institutions, and the integration of resources within the bank is also somewhat inadequate.

### 3.SOME SUGGESTIONS FOR PROMOTING ANTI-MONEY LAUNDERING WORK OF COMMERCIAL BANKS

Due to the market environment, it is particularly urgent to carry out solid anti-money laundering work under the severe anti-money laundering work situation. To this end, it is necessary to strengthen institutional guidelines and do a good job in the basic work of anti-money laundering; strengthen team building and enhance the performance of the anti-money laundering team; and accelerate the integration of resources to enhance the quality and effectiveness of anti-money laundering work.

(1) Strengthen the guidance of the system and do a good job in the basic work of anti-money laundering. With the gradual strengthening of national anti-money laundering regulation, it has become inevitable to promote the implementation of various systems in a solid manner. The study of anti-money laundering related systems from the head office to the grassroots banks is gradually being strengthened, and there is still room for improvement in the breadth and depth of study of anti-money laundering systems in order to carry out anti-money laundering work more effectively. In accordance with the requirements of the AML system, customer identification should be done carefully to control the risk of money laundering at source. Especially with the vigorous promotion of smart devices, customer identification is a key aspect of AML work, and only by controlling it at source can we effectively combat money laundering effectively. At the same time, we should carry out in-depth promotion of anti-money laundering publicity work in accordance with the requirements of the anti-money laundering system, regularly carry out anti-money laundering publicity month activities every year, actively implement the requirements of the regulatory system, do a good job in implementing the system, and focus on the reporting of large and suspicious transactions, so as to effectively enhance the effectiveness of anti-money laundering work.

(2) Strengthen team building and enhance the performance of the AML team. The team is the effective implementation of anti-money laundering. To ensure that, in the complex AML context, it is extremely important to strengthen the AML team. Team building and optimization must be continuously strengthened in accordance with the development trend of anti-money laundering. Firstly, we should attach great importance to the team personnel structure, taking into account the regional environment of the branch and the need for long-term team building, we should continuously optimize and

adjust the team personnel structure, train a group of key personnel with high comprehensive quality, and do a good job of passing on the team to the old and the new; secondly, we should focus on creating a regular training mechanism, and do a good job of training management in all aspects with the help of internal and external resources of the bank, such as relying on external training resources and integrating them into the bank for organizing training to effectively. At the same time, we actively rely on the training resources of the head office to create a multi-dimensional training system of online + offline, and combine the AML training plan to do a good job of training for AML teams at all levels in targeted batches; thirdly, we should improve the team assessment mechanism, guide the strengthening of team process management and goal-oriented assessment management, and assess the performance of team members to effectively promote team performance management.

(3) Accelerate the integration of resources to enhance the quality and effectiveness of anti-money laundering work. With the rapid development and advancement of technology, the use of the integration of anti-money laundering resources is also progressing rapidly with the help of the Internet platform. At present, the head office has put into production the enterprise affiliation query function on the information platform, with the help of which it can help the development of anti-money laundering work and effectively replace the previously used extra-bank systems such as Enterprise Search and Sky Eye Search. To this end, the technical research and development and anti-money laundering work authorities of the head office should further accelerate the integration of technical resources, continuously improve the intra-bank system and effectively enhance the quality of anti-money laundering work by integrating the resources of the internet platform into the intra-bank application. The quality and effectiveness of anti-money laundering work. At the same time, it can continue to enrich in-bank AML scenario applications in line with the development of AML trends, integrate in-bank resources for co-ordinated management, improve the AML integration mechanism of branches nationwide, reduce the duplication of AML work, improve the accuracy of AML work and optimise AML systems by integrating the data reported by local branches on AML work, and improve the effectiveness of AML work in general.

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# Improved Design of Crushing Tooth Structure of Classification Crusher

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**Abstract:** The Classification Crusher is used for coarse crushing of large coal gangue raw coal or minerals with high hardness under harsh working environment. This paper corrects the problems existing in the process of using the broken teeth of the two kinds of Classification Crushers, the tooth ring type and the tooth cap type, and puts forward a new structure design of the tooth ring and tooth cap type crushing teeth. The improved broken teeth have more compact structure and better use effect.

**Keywords:** Classification Crusher; coarse crushing; crushing tooth; improvement

## INTRODUCTION

Classification crusher and other kinds of crushers, its work parts, crushing teeth, are variety. There are integral rollers, tooth plates, tooth rings and movable teeth, etc. Among them, the movable teeth type could be further divided into tooth caps, tooth crowns, tooth boots, inlay and combination types and so on. Classification Crushers with different forms of crushing teeth, each has its own advantages and disadvantages, and it should be paid special attention when making a choice. The choice of crushing teeth is usually depends on the following aspects: first, crushing strength of the broken material; second, the feeding size of the material determines the use of coarse, medium or fine crushing; third, to evaluate the performance index of the Classification Crushers' crushing teeth, mainly to evaluate the crushing strength, reliability, manufacturing difficulty, manufacturing cost, installation method, the degree of difficulty in replacement, replacement cost and replacement cycle, etc.

As is known to all, the coal containing gangue with large particle size of coarse crushing feed or the mineral with high hardness is the most severe test for the various forms of teeth crushing in the Classification Crushers. The problem put forward is helpful to the discussion of selecting the form of coarse crushing teeth and improving the structure of crushing teeth under the above working conditions. According to the research of many experts and the actual use effect of Classification Crushers, under the harsh working conditions of coarse crusher, two kinds of crushing teeth, ring type and cap type, are mostly used.

1 Problems existing in ring type broken teeth under bad working conditions of coarse crushing

(1)Difficult to realize the structure of large tooth and small roller

The large graded crusher used for coarse crushing generally adopts the structure of large teeth and small rollers. Due to the large crushing teeth's large mass, large moment of inertia, and large impact kinetic energy of large materials, it is easy to pierce and crush materials. However, it requires high technical level to cast ring body and large crushing teeth into a whole, and there are also difficulties in cutting.

(2)Difficult to replace

Classification Crusher, especially large scale Classification Crusher, the replacement of tooth ring type crushing tooth is very difficult. First, the crushing tooth roller is too long, the number of tooth ring is too much. Second, the diameter and weight of each ring is rather large, it is difficult to replace it in the absence of large lifting equipment and tall workshop.

(3)Different parts of tooth ring crushing teeth cast with the same material having different mechanical properties

The integral cast ring crushing teeth cannot achieve high hardness and good wear resistance of the tooth tip directly impacting with the material at the same time, and the ring teeth assembled with the spindle must have high impact toughness. To achieve high hardness and good wear resistance, the impact toughness of metal materials will inevitably decrease.

## 2 PROBLEMS EXISTING IN TOOTH CAP TYPE CRUSHING TEETH UNDER BAD WORKING CONDITIONS OF COARSE CRUSHING

(1)Easy to loosen the connecting bolt of tooth cap type crushing tooth

The connection mode of tooth cap type crushing teeth is similar to that of tooth plate type. In the crushing operation of large materials, the bolt is easy to loosen due to the big impact force, poor reliability and large maintenance workload. The main reason for the loosening of the connecting bolts of the tooth cap is that the inner cavity of the tooth cap is assembled by manual grinding and the inner teeth on the tooth roller. Due to the poor precision of manual grinding and large clearance, the connecting bolts is easy to loosen when the crusher is crushing large materials.

(2)Difficult to manufacture the tooth cap type crushing tooth

It is very difficult to manufacture the tooth cap type crushing teeth. First, the tooth cap shape is complex

and the casting technique is difficult. The tooth tip on the tooth cap is required to be of high hardness and good wear resistance, and the inner tooth assembly precision of the tooth cap and tooth roller is also required to be high. It is difficult to machine by mechanical cutting with tooth cap. Second, the tooth on the tooth roller by artificial welding after grinding, not only the position accuracy is low, and weld strength is difficult to ensure. Third, the tooth cap cavity assembled with the inner teeth is repaired by manual grinding, which is difficult to assemble, with poor precision and low efficiency.

(3) Poor service environment of tooth cap type broken tooth and unsatisfactory effect

In the process of using the tooth cap crushing tooth, it is necessary to replace and repair the tooth tip after it is worn out. However, the repair operation environment is poor, and the manual welding has high labor intensity, long welding time and is in the environment of high temperature and smoke. And because the tooth tip is welded to the tooth cap, because the tooth tip and the tooth cap material is different, in the process of crushing the hard material surfacing part is easy to fall off.

### 3. DISCUSSION ON IMPROVING THE STRUCTURE OF BROKEN TEETH UNDER BAD WORKING CONDITIONS OF COARSE CRUSHING

#### 3.1 Improvement for ring tooth crushing

##### (1) Adopting big tooth and small roll structure

The structure of big teeth and small rollers is the ideal crushing teeth with large particle size and high hardness of minerals, so the large graded crusher mostly adopts the structure of big teeth and small rollers. In order to achieve the impact of large energy, good crushing effect. The improved ring crushing tooth is that the original ring body and the crushing tooth are cast into a whole and the improved ring body and the broken tooth are divided into two parts to form a separate ring body and tooth cap. Fig.1 shows the schematic diagram of the improved ring tooth cap crushing tooth. The improved ring body is simpler than that of the original whole cast ring crushing tooth, there are only three internal conical teeth on the tooth ring body and the reinforcing bars connected at both ends and the middle. The improved reinforcement is shown in Fig.2 (A-direction view of Fig.1).

##### (2) Ring does not need to be replaced

Since the improved ring tooth cap crushing tooth becomes separate ring body and cap components, the vulnerable part in the crushing process is the tooth tip on the tooth cap, and the tooth tip is also a separate part in the tooth cap assembly. As long as the tooth cap can be removed, the ring does not need to be replaced, can be used for a long time. It not only solves the problem of non-big tooth and small roller structure, but also solves the problem of ring tooth replacement difficulty.

(3) After the improvement, different materials can be used in different parts of the ring and cap crushing teeth

It can be seen from the improved schematic diagram of ring-tooth cap crushing teeth in Fig. 1 that the original ring tooth crushing tooth material is improved into three kinds to ensure that the ring tooth material has high impact toughness under the premise of sufficient strength. The tooth tip material requires high strength, hardness, good wear resistance. Tooth cap material requirements with strength, hardness, impact toughness moderate comprehensive mechanical properties of good materials.

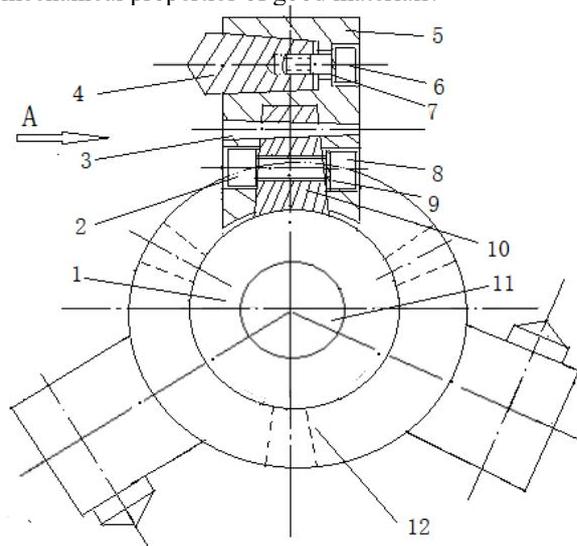


Fig. 1 Schematic diagram of improved ring gear and cap type crushing gear

- 1. Gear ring body 2. Hexagon socket bolt 3. Conical pin 4. Tooth tip 5. Tooth cap
- 6. Hexagon socket screw 7. Spring washer 8. Nut
- 9. Conical internal tooth
- 10. Main shaft 11. Stiffener
- 12. Stiffener

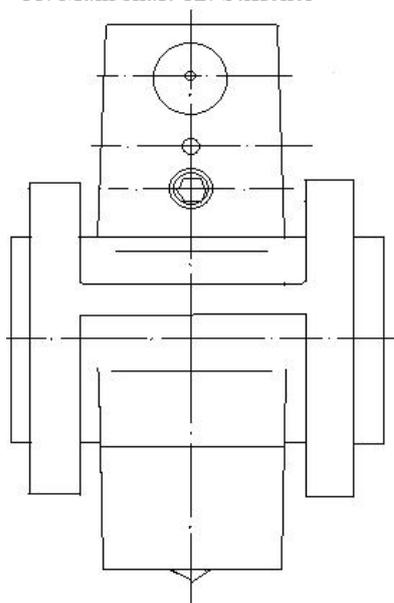


Fig. 2 A-direction view of Fig.1

### 3.2 Improvement of tooth cap type crushing teeth

(1) Solving the problem of easy loosening of connecting bolts

To solve the problem of easy loosening of the connecting bolts, the inner teeth on the ring and the cavity structure of the tooth cap should be improved. In Fig.1, the inner tooth on the ring is designed to be conical, and the inner cavity of the tooth cap is designed to be conical hole. The assembly can not only automatically align, but also the assembly of large contact surface, uniform stress. After pressing the cone inner tooth on the tooth ring body with the cone hole on the tooth cap, the cone pin is used for positioning, then the bolt hole is machined and the connecting bolt is assembled. During crushing, the impact force and torque are mainly on the conical inner teeth with large contact surface, while the connecting bolt only plays the role of auxiliary connection and safety, which solves the problem that the connecting bolt of tooth cap type crushing tooth is easy to become loose.

(2) Easier to manufacture ring and cap crushing teeth after improvement

One reason why the improved ring and cap crushing teeth can reduce the manufacturing difficulty is that the conical inner teeth on the ring body can be completed by mechanical cutting without manual welding and polishing. The other is that the cone hole in the tooth cap cavity can also be made by cutting processing method, which changed the previous manual grinding repair, so as to have both high efficiency and precision.

(3) Greatly reducing maintenance workload using the improved ring and cap crushing teeth

The improved ring and cap crushing tooth can be removed directly from the tooth cap after the tooth tip is worn out. Once replacing the tooth tip with a new

one or modifying and grinding the tooth tip, there is no need to weld the difficult material on the tooth cap by manual welding.

### 4 CONCLUSION

(1) The improved ring and cap crushing teeth are designed to retain their advantages and overcome their disadvantages.

(2) Because the cone inner tooth on the ring body and the cone hole on the tooth cap match of the improved ring and cap crushing teeth, the impact force and torque force mainly act on the cone inner tooth with large contact surface during crushing, as long as the designed cone inner tooth strength is enough, it can achieve stable and safe production.

(3) The inner tooth on the ring of the improved ring and cap crushing teeth is designed to be conical, when the bulk material is hit down, the tooth cap and the cone inner tooth become tighter and tighter.

(4) The tooth tip matches well with the tooth cap cone of the improved ring tooth cap crushing teeth, during the crushing, the impact force makes the cone fit always in the interference state.

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# "Knowledge E-Commerce" —the "Flying Pig" in the e-Commerce Tuyere

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**Abstract:** As the development of e-commerce mobile platforms matures, the pace of life continues to accelerate, and the proportion of time occupied by mobile phones is gradually increasing. A large amount of fragmented time needs to be effectively used to obtain high-quality information, coupled with the rapid development of payment methods, knowledge E-commerce came into being. This paper analyzes the origin of knowledge e-commerce, the existing problems in the early stage of development, and the conditions for the generation of knowledge e-commerce, analyzes the connotation of knowledge e-commerce, points out the development direction of knowledge e-commerce, and announces the coming of the era of knowledge e-commerce.

**Keywords:** e-commerce, knowledge payment, knowledge e-commerce

## INTRODUCTION

E-commerce in China's development of nearly 20 years, China's e-commerce market is almost by BAT(baidu, alibaba, tencent) three points of the world: from the sharing economy bicycle, cars, catering, tourism products and online map to the financial payment and financial management to artificial intelligence is basically divided, e-commerce activities have become a part of people's life. The development stage has also moved from traditional e-commerce to the era of mobile e-commerce. New models continue to emerge. Social e-commerce, live streaming e-commerce, video e-commerce, etc. With the wave of innovation in the e-commerce industry, an emerging model knowledge e-commerce has also arrived quietly.

### 1.KNOWLEDGE PAYMENT HAS SUDDENLY EMERGED

In 2016, "knowledge payment" suddenly appeared in the e-commerce tuyere, Lei Jun once said that "standing in the tuyere, pigs can fly up". Will the pig fly up to be a game-breaker?

In May 2016, the social knowledge community launched by Guoguo Shell immediately answered 32 questions from super Internet celebrity Wang Sicong, earning 220,000 yuan. After a half months, it has more than 10 million listening users, 1 million paying users, with the transaction volume of more than 18 million yuan;

In May 2016, Zhihu launched the Zhihu Live, with dozens of to hundreds of participants in each

live., Ticket prices range from a few yuan to 400 yuan, and Kaifu Lee has set a record of nearly 100,000 yuan.

On June 5, 2016, Logi Thinking "got the first paid subscription column of APP" online. In less than a year, the sales volume exceeded 170 million yuan.

On December 3, 2016, Himalaya launched the "12 3 Knowledge Carnival", selling 50.88 million yuan. In 2019, the 4th "123 Knowledge Carnival" took only 50.88 million in 49 minutes, and the total consumption on that day was fixed at 828 million yuan.

In 2016, knowledge payment ushered in an explosive growth, and the realization of knowledge really brought a surprise to many people.

Therefore, 2016 is also known as the "first year of Pay for Knowledge". More and more people are willing to pay for the required knowledge, and this new demand growth point, lays the foundation for the generation of knowledge e-commerce.

### 3.THE PROBLEM OF KNOWLEDGE PAYMENT — IS NO DOUBT

In 2016, the first year of the knowledge payment, the knowledge represented by zhihu, answer, get, Himalayan payment platform, also emerged a lot of knowledge payment hot style, Luo Zhenyu, Kaifu Li, Luo Yonghao, Xue Zhaofeng knowledge big V can be said to be full, but slowly with the market sinking and industrial chain expansion, knowledge payment emerged a lot of problems.

First of all, the popularity of paying for knowledge is falling back. A large number of users cannot feel the value from the past "knowledge payment" products, which affects the repurchase rate of knowledge products.

Secondly, online copyright protection is difficult.

Thirdly, the lack of content screening and promotion mechanism. How the platform side can realize the push, screening and promotion of high-quality content, as well as the incubation of new IP, s will directly determine the success or failure of the subsequent knowledge payment war.

In order to solve the above problems, Zhihu first launched the "knowledge market" to standardize knowledge payment, and opened the battle of "knowledge e-commerce".

All kinds of difficult problems arising in the process of knowledge payment make some knowledgeable people in the e-commerce industry perceive the trend

of knowledge e-commerce.

### 3.KNOWLEDGE E-COMMERCE FLYING IN THE WIND — — BRIGHT FLOWERS AND ANOTHER VILLAGE

So in 2017, "knowledge payment" changed and gave birth to two pairs of wings. A flying pig — "knowledge e-commerce" was really flying in the wind in the tuture.

In May 2017, the latest version of zhihu APP level page presents users one of the most striking "market" new entrance, inside the zhihu bookstore, paid consulting these three main paid service form, this move, is clearly telling users and competitors: I have the first will pay content centralized management, innovation of a Tmall type knowledge ecology.

We compare the establishment conditions of Tmall mall and take a look at the conditions of "knowledge e-commerce".

First of all, do e-commerce goods to be large categories.Based on the existing social relationship and concern relationship, now Zhihu, get, answer, Himalayan market "includes knowledge" commodity " category and theme, is rich enough, not only can meet the different needs of different scenarios, can also from the centralized entrance, more effectively collect UGC (user original content), so as to facilitate their content output.

Secondly, the e-commerce business to sell the product path is more direct.Relevant data show that due to major platforms continue to strengthen the construction of knowledge e-commerce, the conversion rate of users has been accelerated,

Finally, after e-commerce, knowledge payers are more guaranteed.On the one hand, there is no reason to refund, user evaluation, margin and other mechanisms can be enough to attract the attention of users and encourage them to pay, on the other hand, the traffic subsidy of the high evaluation speaker, open a green channel cooperation to prevent product infringement, and also protect the interests of knowledge sellers, and the whole knowledge ecology can operate healthily.

The rise of knowledge e-commerce is in the right place at the right time, and his generation and development meet the needs of China's social development.Chinese people spend the most time occupied by mobile phones in the world. As the pace of life accelerates, a large amount of fragmented time needs to be effectively used to obtain quality information.The emergence of the mobile Internet and the popularity of smart phones give consumers the opportunity to make full use of their fragmented time.And refined knowledge products can targeted solve the single point needs of users.The world's most popular and developed mobile payment technology provides convenience to pay for knowledge.Therefore, there are products, consumption, easy to pay, low threshold, high profit, short cycle of "knowledge e-commerce" emerged at

the historic moment.

With the emergence of "knowledge e-commerce", major "venture capital" flocked to it.Nearly 1 billion yuan of venture capital has entered the enclosure of the "knowledge e-commerce" movement.

Has opened the production and sales of knowledge products, financing of more than 100 million yuan, knowledge community and knowledge product platform e-commerce model, tens of millions of yuan, Himalaya opened the e-commerce model of audio production and sales, obtained 60 million yuan of Ali, and micro question and answer, calligraphy, lychee micro class and goose pass have opened the "knowledge e-commerce" mode has also obtained venture capital investment.

Because the essence of "knowledge electricity" is through trading means to make more people willing to share their knowledge accumulation and cognitive surplus, is through the market rules and convenient Internet communication optimization of information configuration, so "knowledge electricity" industry will directly transform and integrate the existing education, publishing, advertising, consulting services, we will see similar to Tmall scale new electricity — "knowledge electricity", "flying pig" began to take off.

Longyuan Digital Group chairman Tang Chao bluntly, the future knowledge service industry will certainly usher in a golden era.

Chen Nan, a staff writer, once pointed out that the so-called knowledge e-commerce is actually a large knowledge sales platform for the majority of netizens and institutions. This platform does not need to be newly built. It can be not only Zhihu, separate answer, Himalayan, but also Logi thinking, Weibo, or WeChat, QQ, etc.

To sum up, knowledge e-commerce specifically refers to the behavior of using the information difference between information producers and consumers to package information into products or services and sell them through the Internet platform. China's "knowledge e-commerce" has just kicked off. Let's wait and see where the future goes.

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# "New Infrastructure" will Promote the Integrated Development of the Great Bay Area of Guangdong, Hong Kong and Macao

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**Abstract:** The Great Bay area of Guangdong, Hong Kong and Macao has strong economic strength and concentrated innovative elements, creating 12% of the country's total economic output with less than 1% of the country's land area and 5% of the total population. Supported by technology, the "new infrastructure" will eliminate regional barriers and accelerate the integration of Guangdong, Hong Kong and Macao in the Great Bay area, which will contribute to the cooperative development of all regions in the bay area and achieve a win-win situation.

**Keywords:** "New infrastructure"; Great Bay area; The integrated development

## 1.THE NECESSITY OF INTEGRATING THE GREAT BAY AREA OF GUANGDONG, HONG KONG AND MACAO

In the 1980s, manufacturing was one of the main industries in Hong Kong, employing 41% of the labor force and creating 23% of the Hong Kong's GDP. After the reform and opening up, the manufacturing industry in Hong Kong moved inward, and in 2018, the innovated GDP of the manufacturing industry in Hong Kong only accounted for 1.08%. Hong Kong's economy is dominated by real estate, finance, tourism and trade in services. As a global financial center, Hong Kong has a rich financial ecosystem, obvious advantages in payment and clearing, and a high degree of internationalization. By virtue of ABCDE (artificial intelligence, blockchain, cloud computing, data economy, edge computing) and other computing, inland fintech enterprises have realized the operability of different currencies, promoted the internationalization of RMB, and helped Hong Kong finance to build financial rules and standards. It provides data analysis for the Hong Kong market by virtue of the intelligent system in the mainland to analyze consumer behavior, and simplifies service procedures by virtue of facial recognition, unmanned retail and other mobile payment functions. So inland technology can help Hong Kong's major economies, such as finance and services, break through geographical constraints and barriers.

The interaction between Hong Kong economy and the mainland economy is not equal. According to Pan

Yuanyuan's assessment of Hong Kong's Contribution to the Mainland Economy - Based on the Calculation of Brokers' Commission, Tongji University explained that Hong Kong's contribution to the mainland economy as intermediaries accounted for 0.9-1.2% of the GDP of the mainland economy in 2018 and 2.3-2.5% in 1998. In Hong Kong, the share of profits earned by mainland Chinese enterprises in Hong Kong's GDP was 34.8 to 44.9% in 2018, and 14 to 15.4% in 1998. We can further strengthen bilateral economic cooperation through the integrated development of the Greater Bay Area.

The Macao SPECIAL Economic Zone is also dominated by the service industry and tourism, with a small proportion of the real economy. The Hong Kong and Macao SPECIAL economic Zones and the mainland share geographical advantages, solid cooperation foundation and complementary industries -- Guangdong province mainly focuses on the real economy of innovation and technology, while Hong Kong and Macao mainly focus on the real estate and service industries. Strengthening the economic integration of Macao, Hong Kong and the mainland is conducive to spillover effects and win-win outcomes.

## 2."NEW INFRASTRUCTURE" WILL HELP FACILITATE THE INTEGRATED DEVELOPMENT OF THE BAY AREA

### 2.1 The impact of "new infrastructure" on bay Area development

The "new infrastructure" is based on 5G infrastructure and combines new technologies to connect capital, talent and information from across the Guangdong-Hong Kong-Macao Greater Bay Area to realize intelligent, virtual and information-based production and management. Combine with traditional trades and industries to form a new model.

《The guangzhou accelerate the new digital infrastructure development action plan for three years (2022)》referred to as the "action plan", in this paper, the "new construction" of the construction of the main purposes are: to build information based leading cities, urban scenario 5G application ecosystem, intelligent and innovative wisdom city construction and build a bay area of guangdong industrial concentration area of artificial intelligence.

To build the Great Bay area of Guangdong, Hong Kong and Macao into a global cross-border "smart manufacturing city" and form a leading industrial Internet infrastructure with low latency, high reliability and wide coverage in China. We will work with the Bay Area to develop the industrial Internet platform system and build a national core infrastructure in cyberspace.

The focus of "new infrastructure" on 5G development can be applied to "ARTIFICIAL intelligence scene construction action", "Industrial Internet finance innovation action", "smart charging infrastructure improvement action" and other fields. Combining financial securities, online games, cloud computing, video playback, data hosting, disaster recovery and other businesses, we will promote the construction of 5G+ ultra HD video, smart agriculture, smart education, smart medical and other vertical application demonstrations in industrial parks, agricultural parks, schools, hospitals, cultural and tourism attractions and other scenes.

## 2.2 New Infrastructure development in the Guangdong-Hong Kong-Macao Greater Bay Area

2019 marks the first year of 5G, the core of "new infrastructure", and the popularity of 5G continues to rise. On March 4, 2020, a meeting of the Standing Committee of the Political Bureau of the CPC Central Committee stressed "accelerating the construction of 5G networks, data centers and other new infrastructure". Countries around the world are actively developing 5G, with more than 30 countries and regions realizing 5G commercialization. In 2020, the global 5G service market was \$53.93 billion. Guangdong province actively responds to national policies. Guangdong Mobile industry partners held a press conference on "Moving 5G Smart Lead Bay Area" in Guangzhou, planning to build 10,000 5G base stations to build the largest and best quality 5G in the Bay Area. Achievements have been made in 5G construction. The details of 5G construction in Guangdong province, which belongs to the Greater Bay Area, are shown in the following table:

Table 2-1 5G construction of cities in Guangdong Province that belong to the Great Bay area of Guangdong, Hong Kong and Macao

Region	Number of completed 5G base stations by the end of 2019	Number of existing racks in 2019	Number of new 5G base station sites in 2020
Guangzhou	15969	34676	1581
Shenzhen	14810	25213	1230
Zhuhai	548	2134	105
Foshan	1701	10414	181
Zhaoqing	160	428	105
Huizhou	456	803	72

Dongguan	1515	17618	229
Zhongshan	567	5971	210
Jiangmen	150	367	151

Data source: Base station technology data source CCID Think Tank; The data on the number of racks were obtained from industry and Information Bureau of Guangdong Province

Su Shaolin, director of the Guangdong Provincial Communications Administration bureau, said 5G is expected to cover more than 100,000 urban centers in the Pearl River Delta by 2020. By the end of 2019, about 116,000 racks had been put into production and 72,000 racks were in use in Guangdong province. The number of racks in Guangzhou, Shenzhen, Dongguan and Foshan, the top four cities in the province, has passed ten thousand.

In addition to paying attention to 5G infrastructure construction, Guangdong province has opened 517 base stations, 3,525 special lines, 2,068 telephone lines, and 66,952 key base stations, 11,344 government and enterprise customers, and 64,126 special lines. Through emergency capacity expansion, network optimization and additional emergency vehicles, the 4G network communication guarantee for 175 highway prevention and control inspection stations has been strengthened.

After the construction of "new infrastructure" foundation, it is combined with other industries to produce the maximum effect. Guangdong province is actively planning new infrastructure construction. The main projects include 33 new infrastructure projects such as intercity rail transit, key laboratories, transportation facilities and smart parking lots. In October 2020, Shenzhen Municipal People's Government and the People's Bank of China jointly launched the DC/EP red envelope pilot project. In 2020, the new tax department of Hengqin city of Zhuhai will withdraw from launching cross-border RMB whole-course electronic tax payment service with UnionPay credit and "silver flash payment" as the carrier. China Mobile Hong Kong Co., LTD. (referred to as China Mobile) officially entered the new milestone of 4.5G network through Huawei's innovative network technology. Cooperate with leading enterprises such as Jingxin Communications, Foxconn, Gree Electric Appliances, TCL and China Construction Steel Structure to build "Guangdong 5G+ Industrial Internet Application Demonstration Park".

The financial sector is also contributing to the development of "new infrastructure" in the Greater Bay Area. The launch of the science and Technology Innovation Board in 2019 pushed tech, media and dim sum companies past industrial companies to take the top spot in terms of new share issuance. On the morning of May 12, 2020, special bonds worth 71.2 billion yuan were issued, among which new infrastructure special bonds worth 8.66 billion yuan were issued for the first time.

"New infrastructure" is already taking effect. During the epidemic prevention and control, video conferences were successfully held through 5G networks to share examinations and remote consultations of patients. Combined with robot technology, robots replace medical staff to carry out physical examination and material distribution. 5G thermal imaging temperature screening system, retrospective screening. 5G+4K high-definition video conference services, remote office, command and dispatch.

### 3 PROBLEMS EXISTING IN THE CONSTRUCTION OF "NEW INFRASTRUCTURE" IN THE GREAT BAY AREA OF GUANGDONG, HONG KONG AND MACAO

#### 3.1 Unreasonable distribution of base stations

High building density in the Guangdong-Hong Kong-Macao Greater Bay area, businesses and some units have doubts or conflict with 5G base stations, Chen Psychological direct protest against the construction of base stations, resulting in difficult and unsatisfactory site selection, difficult planning of 5G base station construction in some areas, weak signal, signal blind areas.

#### 3.2 The development of 5G is difficult

on the one hand, the electricity cost of base stations is high. The electricity price of transfer power supply and direct power supply is 1.21 yuan and 0.79 yuan respectively. At present, the base station lives by transfer power supply, which increases the battery cost of base station. On the other hand, progress is

slow. The current market is dominated by 4G mobile phones. The price of newly purchased 5G mobile phones is relatively high, and the development of 5G users is slow. SA network is not mature, there is no unified standard, 5G integration of various industries is difficult, resulting in a large number of viewers.

#### 3.3 Low level of intelligent operation

Traditional data accounts for 70%, which is the main form, and manual operation and management are still the main mode. The automation, intelligent and virtualization management technology department is mature. Talent shortage. The reason is the lack of relevant talents.

#### ACKNOWLEDGMENT

This research was funded by the General Project in 2020 from Guangdong University of Science and Technology. Project name: "New Infrastructure" and the Integrated Development of Guangdong, Hong Kong, Macao Da 'an District. Project number: GKY-2020KYYBW-7

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# Practice and Exploration of "Wisdom Party Building" Applied to Party Member Education in Colleges and Universities

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**Abstract:** In the context of the information age, this article takes Guangdong University of Science and Technology as an example to conduct an in-depth investigation and analysis of the current status of the college's "wisdom party building platform". Analyze the problems existing in the application of "wisdom party building" to the education of party members in colleges and universities, and further propose the implementation path of paying attention to talent training, strengthening the top-level design, and consolidating the basic platform. It aims to provide a certain reference value for the application of "wisdom party building" to the education of party members in colleges and universities.

**Keywords:** Wisdom Party Building; Agricultural products e-commerce; E-commerce talent; Cultivation mode; Party member education; practice; exploration

## 1. PREFACE

In recent years, the Party Central Committee has successively proposed important strategies and requirements for "smart society", "digital China" and "network power"[1]. "Wisdom Party Building" is a new model of "Internet + Party Building" explored in the development of information technology for grassroots party building work. Based on the investigation of the construction of the "Smart Party Building" platform of Guangdong University of Science and Technology, this article analyzes the problems of the application of "Smart Party Building" in the education of party members in colleges and universities and proposes corresponding implementation paths. It aims to promote the use of "wisdom party building" in the education of party members in colleges and universities.

## 2. INVESTIGATION ON THE STATUS QUO OF "WISDOM PARTY BUILDING" APPLIED TO PARTY MEMBER EDUCATION IN COLLEGES AND UNIVERSITIES

This article takes Guangdong University of Science and Technology as an example, and conducts research through a combination of online and interviews. The construction of the college's "wisdom party building" platform mainly includes the following aspects:

### 2.1 Establish a college party-mass work network

The initial practice of "Internet + Party Building" was to establish an Internet-based "Internet + Branch", referred to as "Online Party Branch"[2]. On the one hand, Guangdong University of Science and Technology adopted the "Party Building" module embedded in the homepage of the college's official website. Use this module to realize resource sharing and communication among different levels of party organizations within the college, and provide the college with more targeted channels for party member education. On the other hand, the "Party and Mass Work" module is embedded in the homepage of each secondary college, which mainly includes theoretical homes and party and mass activities modules. Collect information on organizational life meetings, theme party day activities, and learning activities carried out by the faculty and labor party branch and the student party branch of the college.

### 2.2 Establish a WeChat public account of "Guangke Party Building Pioneer"

Guangdong University of Science and Technology mainly uses the "Guangke Party Building Pioneer" WeChat official account to establish a good communication platform inside and outside the college. Among the three custom menus of this official account, "Pioneer Information" is the first menu, including three modules: campus party building, pioneer activities, and party affairs disclosure. It mainly collects information on characteristic activities carried out by the college's party committees and grassroots party organizations, as well as information on party organization structure personnel and changes. "Learning Corner" is the second menu, including three modules: important speeches, party rules and regulations, and current affairs hotspots. Contains important speeches by state leaders, party rules and regulations, branch work regulations, current affairs news, etc. "About Us" is the third menu, which mainly introduces cases of outstanding party members, showcases the style of outstanding party members, sets an example for party members and the masses, and delivers positive energy. At the same time, the "Party Building Platform" module is embedded in each WeChat official account of the secondary colleges. Collect information on thematic party day activities carried out by grassroots

party branches, dynamic information on party committees, and document information on learning party history and other theoretical knowledge. Through the WeChat official account platform, we can more concisely grasp the learning and ideological trends of party members, and provide high-quality auxiliary functions for the school's party building work to better play its services.

### 2.3 Establish party organization WeChat group and QQ group

The party committee of the college and the grassroots party organizations of the secondary colleges all adopted the method of creating the WeChat group of the party branch and the QQ group of the party branch. Use new media to better publicize and promote grassroots party building work. QQ group of the Party branch is mainly used for the Party branch to issue meeting notices, document publicity, topic collection, work plan and summary. The wechat Party branch exchange group is mainly used to issue notices and documents, collect questions for organizational life meetings, encourage party members to make suggestions, investigate and make democratic resolutions for party activists and probationary party members through the wechat group, understand the ideological trends of Party members and carry out training and education. Complete party fee payment and other work through wechat group payment function. Wechat communication group and QQ group have become the operation mode frequently used by all grass-roots party branches of the school at this stage. Through the combination of these two new media, we can roughly meet the most basic needs of the Party branch.

## 3. ANALYSIS ON THE PROBLEMS EXISTING IN THE APPLICATION OF "SMART PARTY CONSTRUCTION" TO THE EDUCATION OF PARTY MEMBERS IN COLLEGES AND UNIVERSITIES

In recent years, in the attention and practice of the Party Central Committee and governments at all levels on "smart party construction", the education of Party members based on "smart party construction" has made a certain breakthrough. Combined with the investigation, there are also some problems in the application of "smart party construction" to the education of Party members in Colleges and universities.

### 3.1 The thinking concept and quality ability of "smart party building" need to be improved

In the Internet age, the application of "smart party construction" to the education of Party members in Colleges and universities poses a certain challenge to the organizers of Party member education in Colleges and universities[3]. The organizers of Party member education in Colleges and universities still stay in the traditional thinking mode of Party construction education, and habitually use the traditional indoctrination and command mode to organize and

carry out party member education. As a result, the intelligent education of college party members often only stays at the level of business work, and does not really implement the quality of Party member education. "Smart party building" puts forward certain high requirements for the technical ability and information quality of the organizers and managers of Party member education in Colleges. However, college teachers are busy with scientific research and teaching, students are busy with their studies. They lack centralized learning and Research on information technology related to "smart party construction". The information quality and ability need to be improved, resulting in the lack of ability to apply "smart party construction" to carry out party member education activities, only stay on the surface of concepts and theories, and can not dare to rely on the Internet platform to carry out party member education in Colleges and universities.

### 3.2 It is easy to form formalism that emphasizes technology and ignores content

In the process of using "smart party building" to carry out party member education, there is formalism that focuses on technology and ignores content[1]. Information technology has a strong information carrying capacity, and many Party organizations actively establish online party branches. In order to facilitate "trace management", various learning documents and data information are released to the website and communication group. It leads to serious information overload, and even some party members of grass-roots party organizations stay in form in order to complete their tasks. With the development of information technology, many grass-roots party organizations have explored and practiced "smart party construction", and spent a lot of money to buy and build platforms related to "smart party construction". However, after the completion of the construction, there is a lack of ignored content construction and careful design. The amount of reading is low, and the intelligent education of college party members is superficial.

### 3.3 Lack of long-term effective management mechanism

At present, the education of Party members in Colleges and universities still does not fully meet the requirements of "smart party construction". All grass-roots party organizations and departments build relevant platforms and modules of "smart party construction" based on their own needs. Lack of unified top-level planning and design, lack of sharing between departments, organizations and organizations, forming separate "data islands". After the "smart party building" module is built, there is a lack of effective operation and management mechanism, slow update of educational resources and content, and lack of professional platform operation talents. The security management mechanism of "smart party building" is not perfect, and the information security, personal

privacy, confidentiality and system security laws and regulations involved in the operation of the system need to be strengthened. The information content transmitted through the Internet is diverse, which will form a certain guiding role for the values of college party members and pose a certain threat to the ideological security of colleges and universities.

#### 4. EXPLORATION ON THE APPLICATION OF "SMART PARTY CONSTRUCTION" TO THE EDUCATION OF PARTY MEMBERS IN COLLEGES AND UNIVERSITIES

##### 4.1 Pay attention to the talent training of "smart party construction" in Colleges and Universities

"Smart party building" puts forward more requirements for technical ability and information quality for college Party member education Cadres, organizers and Party members. Colleges and universities should build a learning organization for "smart party construction" and actively organize the training of college party members, especially cadres, organizers, managers and party affairs workers. Set up special training organizations to carry out special training on "smart party building" and strengthen training. In the process of party affairs training, integrate the relevant theories and knowledge of "smart party construction" information technology, and create a team of working talents who understand information technology and are willing to study.

##### 4.2 Strengthening the top-level design of "smart party construction" College Party member education

Colleges and universities should take the overall requirements of Party member education in the new era as the guidance, carry out unified planning and leadership, and strengthen the top-level design of "smart party construction"[4]. First, we should use systematic thinking to build the overall plan and implementation plan of "smart party building", integrate the Internet and information technology into the education of Party members in Colleges and universities, and build an online and offline education model with the combination of virtual and real. Second, encourage all departments of colleges and universities to strengthen information and resource sharing, accelerate the pace of resource integration of Party committees and departments at all levels of the University, and build an integrated pattern of "smart party construction" with Party committees of the University as the main body, Party organizations of colleges and departments as the main body and serving the masses. Third, from the national level, actively introduce plans and policies related to "smart party construction", promulgate and implement

relevant "smart party construction" work regulations and plans, make the education of Party members in Colleges and universities more standardized, and improve the perfection of the construction of relevant modules of "smart Party Construction".

##### 4.3 Consolidate the basic platform construction of "smart party building"

Colleges and universities should use "smart party building" to carry out party member education activities, strengthen the construction of "smart party building" infrastructure and system platform, and build a stable and efficient platform. Firstly, strengthen the network construction. Colleges and universities should strengthen the capital investment in the network construction, so that teachers and students can carry out party member education and Party construction related work through the network and platform anytime and anywhere. Secondly, we should build and consolidate the platform of "smart party building", carefully design the "smart party building" APP, official account and portal website modules, and create a comprehensive platform that integrates party work platform, Party members' learning and education, and Party member management. Thirdly, carry out accurate management, make full use of the functions of intelligent analysis and real-time perception of "smart party building", and change the traditional indoctrination education and manual operation into intelligent education and automatic reminder, which will help to improve the scientific and intelligent level of Party member education in Colleges and universities.

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# Study on Urban Green Transportation Culture and its Ecological Mechanism

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**Abstract:** By analyzing the concept culture of urban green transportation construction, this paper expounds the dialectical relationship between urban development and urban transportation, green transportation and urban culture, comprehensively evaluates and systematically expounds it by using analytic hierarchy process, and puts forward the construction concept of urban green transportation concept culture. Analyze the development status of urban green transportation culture, further improve the public facilities system of urban green transportation culture, and build the comprehensive function of urban green transportation facilities and sustainable development evaluation indicators. Based on the definition of traffic culture and its ecological mechanism, a green traffic construction framework under the guidance of traffic culture is constructed.

**Keywords:** Urban culture; Traffic culture; Ecological mechanism; Green transportation

## 1. INTRODUCTION

At present, the urban traffic development under the concept of green traffic is still in its infancy[1]. With the emergence of urban shared bicycles, green traffic, as an important part of the urban traffic structure system, represents the continuous progress of urban green traffic, which not only alleviates the congestion of urban traffic, but also reduces the environmental pollution caused by vehicle exhaust emissions. From the perspective of green transportation culture, this paper analyzes the dialectical relationship between urban green transportation and urban cultural construction, puts forward the construction concept of urban green transportation concept culture, and discusses that the development of urban green transportation is the only way to promote the sustainable development of economy and society in China. Based on the characteristics of urban green transportation, the definition of transportation culture and its ecological mechanism, this paper puts forward some feasible suggestions for the development of urban green transportation, and further constructs the cultural context of urban green transportation system.

### 2. concept and cultural status of urban green transportation construction

#### 2.1 Concept and cultural status of urban green transportation construction

"motorized" transportation development concept of urban development decision-makers

The spirit of the Fifth Plenary Session of the 19th CPC Central Committee has made a strategic deployment for the development of socialism with Chinese characteristics in the new era, which is of great significance to make a good start and take a good step in building a socialist modern country in an all-round way. Influenced by the urban traffic development model of western countries, China has officially started the process of modern urban construction. The one-sided pursuit of motorization has become the main problem of urban development decision-makers in traffic construction. The ownership of motor vehicles, especially cars, has become the fundamental premise of strategic decision-making of traffic construction and has evolved into an important basis for measuring urban modernization.

Continuously improving mobility has become the main theme of urban traffic construction. In order to meet the traffic and transportation needs of a sufficient number of vehicles, gradually increase the investment in urban road facilities construction. Thus, the concept of "motorized" urban traffic development has changed the city's appearance, exacerbated road congestion, induced more problems, unilaterally pursued highway traffic construction, potential parking and local rectification, resulting in disorderly expansion of traffic construction land, lack of long-term traffic strategic planning system and traffic operation and maintenance mode at the level of public policy, and ignored public transport and slow traffic, It has seriously disrupted the urban traffic order, resulting in the embarrassing situation of "the more roads are repaired, the more cars are, and the more heart is blocked".

In fact, urban spatial planning is an effective means to open modern urban life. It does not exist objectively for automobile transportation. Motorization and the movement of people and things are not the main purpose, but an important method to realize people's life in the city. The concept of urban transportation development with motorization as the core will inevitably pay a heavy price. In the 1930s, the U.S. government adopted the laissez faire strategy of motorization, invested in road and bridge construction and encouraged the whole people to buy cars, which greatly stimulated the national economy and was known as the "golden age of growth on the wheel". Per capita gasoline consumption has risen

sharply, five times that of EU countries and Japan. The number of cars has also promoted the disorderly expansion of the scope of urban living space, which not only accounts for the area of cultivated land, but also destroys the ecological environment, resulting in traffic paralysis in some areas. The promulgation of the environmental protection act of the United States has actively advocated and developed green public transport and reduced car travel, but with little effect. Therefore, we find that once the traffic operation mode dominated by "motorized traffic" is formed, it is even more difficult to change it in the short term.

### 2.2 Traditional linear thinking mode of urban development planners

For a long time, due to the lack of long-term planning between urban construction and urban transportation, the overall thinking on urban transportation planning is far from enough. It only stays at solving the traffic problem at a certain time and space point, ignoring the overall layout within the scope of the overall urban transportation planning, and the coexistence and coordinated development of multiple transportation modes, resulting in the coexistence and coordinated development of urban transportation and urban construction. The social economy is seriously disjointed, especially the contradiction between urban engineering construction facilities and road traffic is becoming increasingly prominent.

The disorderly expansion of urban construction has created rows of towering buildings, but the dense urban buildings have not left enough road space for traffic development. With the rapid development of motor vehicles, road expansion has become an essential part of traffic planning. However, the road widening is always limited. The traffic problem in one area is solved by expanding the road, but the road traffic problem in another area is exacerbated. We can never get rid of the vicious cycle of "traffic jam - road construction - traffic jam - road construction". Therefore, we need to be based on urban development ideas and planning, get rid of the traditional linear thinking mode, build the concept of coordinated traffic ecological development of the whole city, and fundamentally plan the harmonious development of urban construction and urban traffic.

### 2.3 "Car standard" thought of urban construction traffic designers

The main idea based on car traffic efficiency runs through the urban traffic planning and design system, equates motor vehicle traffic with the object of road traffic planning, pays too much attention to the construction of road facilities such as expressways, main roads, viaducts and overpasses that meet the passage of motor vehicles, and invests a lot of construction costs. The construction viewpoint of "Vehicle-oriented" replaces the construction viewpoint of "people-oriented". The limited funds are applied to the expansion of urban trunk roads and the renewal of high and new technologies, and the

smooth urban roads are used as the core index to measure the urban traffic service level. The phenomenon of motor vehicles occupying non motor vehicle lanes and sidewalks is widespread, ignoring the traffic speed of pedestrians and non motor vehicles, and some non motor vehicle road sections are reduced and adjusted to motor vehicles. Some non motor vehicles were forced to extend to the sidewalk. The time left for pedestrians and bicycles at the road intersection is short, which brings some difficulties for pedestrians and non motor vehicles to cross, and there are serious potential safety hazards.

### 3. Construction of urban green transportation concept culture

#### 3.1 Green transportation development view of urban development decision makers

Modern urban construction and development must build an energy-saving, environmental protection, low-carbon and green transportation system, which requires urban development decision-makers to adhere to the green transportation development concept of people-oriented, resource conservation, respect for nature and environmental protection, abandon the "motorized" transportation development concept and the development idea of "pollution first and treatment later", and comprehensively build a "people-oriented and public transportation priority". Through overall planning and coordination, scientific and technological empowerment, innovative design and careful deployment, a transportation system covering green travel such as rail transit, daily bus, bicycle and walking has been established to explore the road of urban green transportation development.

#### 3.2 Systematic and scientific thinking mode of urban construction planners

Urban transportation plays a vital supporting role in urban economic and social development. As a subsystem of the urban system, urban construction planners must jump out of the traditional linear thinking mode and thinking set constraints, establish a systematic and scientific thinking concept in urban master planning and construction, and coordinate urban transportation and economic development. The relationship between function improvement and people's well-being, only when the function of the transportation system is consistent with the needs of the socio-economic system, can the coupling operation of transportation and socio-economic system be guaranteed to be in the best state[2].

From a systematic perspective, strengthen the planning and construction of comprehensive transportation hubs and implement the integrated development strategy of transportation, improve the operation efficiency and benefits of the comprehensive transportation system, realize the seamless connection between diversified transportation modes, actively adapt to the comprehensive transportation development strategy, accurately grasp the strategic objectives and

functional positioning of the transportation system, and meet the needs of social and economic development, Form a dynamic isomorphic coordination subject to boost the sustainable, efficient, safe and reliable high-quality development of the social and economic system. In order to better improve the accessibility, cohesion and relevance of the whole transportation system, we should coordinate and macro-control from the aspects of policy formulation, technical standards, data sharing and management system, and realize the high integration of transportation system and the flexible switching of transportation services.

### 3.3"Human centered" thought of urban traffic designers

The design of people-oriented urban green transportation must change from "car standard" to "people-oriented" design idea, and gradually change to the design of sidewalks and bicycle lanes. Meet residents' demand for travel mode selection, minimize the negative impact of travel, and cannot meet the "quantity" of travel at the expense of the "quality" of travel. Accelerate the construction of comprehensive public transport infrastructure such as urban rail transit, bus lanes and BRT bus rapid transit lines, comprehensively promote the urban transport development mode oriented by public transport, realize the "zero distance transfer" of passenger transport and the "seamless connection" of freight transport, solve the nearby travel of residents by walking, sharing bicycles and other transportation modes, and use public transport Rail transit or taking taxis and other ways to meet long-distance travel, build a new pattern of urban transportation development, and further improve the people's sense of gain, happiness and security.

### 3.4Green travel concept of urban traffic travelers

To establish a sustainable green transportation system, it is particularly important for urban residents to update their travel concept. To advocate green travel and make effective use of urban public resources, we should establish the concept of "everyone participating and building a green home" in urban transportation, start from ourselves, innovate on the basis of rational examination of Western automobile culture, reshape automobile consumption concept, integrate into green transportation culture, and increase the promotion and guidance of urban green transportation concept and transportation culture. Jointly cultivate the green circular low-carbon transportation culture, make the green circular low-carbon development become the action consciousness of the public, give priority to walking and sharing bicycles, and drive less or do not drive, so as to contribute to the construction of urban green transportation system.

### 4.Ecological mechanism of urban construction traffic culture

In terms of biological significance, the internal

working mode of organisms is often the core of the study of "mechanism", including the interaction between internal structures of organisms and the relationship between various change processes [3]. Like the research method of biological mechanism, traffic culture carries the elements of traffic development history, material form and ecological culture. Like the process of species inheritance and evolution, the ecological mechanism is composed of the ecological landscape of transportation facilities and the ecological organization of transportation, which has indispensable ecological performance and functional laws. In short, starting with the study of traffic culture from the description of cultural phenomena to the analysis of essence, this paper expounds the ecological cycle system of traffic culture.

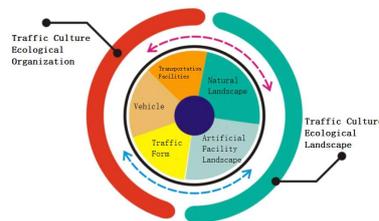


Fig. 1 Ecological circulation system of transportation culture

### 4.1Connotation of traffic culture

As a special cultural form of the integration of theory and reality, transportation culture is the sum of material and spiritual wealth created by people relying on information activities, and takes transportation resources and transportation technology as the fulcrum of social activities. Traffic culture carries many attributes such as objectivity, independence, conceptuality, dynamics and inheritance, including cultural elements such as material culture, institutional culture and spiritual culture, so as to form a good traffic cultural awareness and ability. Therefore, traffic culture in a broad sense should be grasped from four aspects: material form, social norms, behavior mode and spiritual concept. As the material form of the "tower" of traffic culture, it belongs to the material subject of traffic culture, constitutes the basic entity of traffic culture, and fully stimulates the permeability factors in the productivity system and the remarkable achievements of science, technology and culture.

Social norms and standards are the "tower waist" of transportation culture[3], including transportation tools and transportation facilities. They are the ecological mechanism of transportation culture, which is guided by coordinating the relationship between transportation elements and aims at pursuing efficiency. The traffic culture of behavior mode is "tower neck", which is the general name of people's traffic demand, consciousness, physiological and psychological activities (such as traffic selection, acceptance and utilization) under the influence of traffic culture. It is the concentrated embodiment of

transportation civilization and plays an important cultural role in the process of transportation. As a spiritual concept, traffic culture is the "spire" of traffic culture and guides the healthy development of traffic culture ecology. The four components of transportation culture and their relationships are shown in Figure 2.

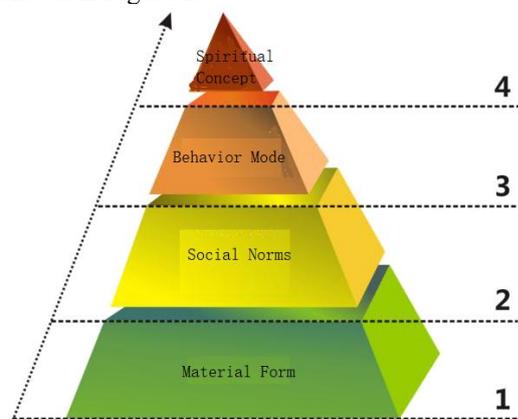


Fig. 2 Transportation culture system map

#### 4.2 Traffic cultural ecological landscape

The leading ecosystem of traffic culture serves the ecological landscape of traffic culture. It is an image system existing or expressed in material form, including natural landscape and artificial facility environment. It is two indispensable aspects of the ecological landscape of traffic culture. In the process of traffic development, natural landscape is an important feature of regional traffic culture. It is a natural traffic space system formed by regional landform, vegetation, hydrology and surface conditions. Venice water city transportation is a classic case. Artificial facility environment is the material carrier for human beings to achieve traffic goals. It is composed of traffic public facilities, urban space, urban streets, landscape greening and other elements. Its reasonable organization design is the goal orientation of urban traffic planning. In the course of the development of transportation culture, the form of facilities and environment in different historical stages will become an important symbol of the development of transportation culture. From the traditional traffic culture of narrow lanes, mud roads and stone roads to the cultural form of modern transportation branded on urban subway, light rail, overpass and expressway. The healthy development of urban transportation is inseparable from reasonable, orderly and continuous transportation facilities and environment.

#### 4.3 Transportation cultural ecological organization

Traffic cultural ecological organization refers to the traffic awareness and traffic ethics gradually formed by the interaction between traffic participants and traffic facilities, vehicles and forms, which is conducive to the development of traffic ecology. Traffic awareness is the cognitive level and basic attitude of traffic actors towards the interaction

between their own traffic behavior and urban traffic state, as well as the behavior choice based on the accurate judgment of traffic rules and traffic behavior consequences. Traffic ethics is based on the consciousness of traffic consciousness, has the requirements of self-regulated traffic behavior and self-discipline, and actively coordinates its own traffic behavior choice and road traffic operation state.

Traffic ecological organization is an important factor in the development and change of traffic culture, and then affects the change of ecological landscape. At the same time, factors such as transportation technology, means of transportation, transportation system and social consciousness will promote the change and development of transportation culture, just like the replacement phenomenon in the development of species community structure, which is the result of competition and selection among transportation cultural ecological organizations. Here, the development and change process of transportation culture can be understood as the inevitable result of science, technology, population and economic development. The invention and wide application of automobile lead to the expansion of traffic scope and the renewal of traffic awareness. The construction of Expressway shortens the time distance between regions, integrates the culture between regions, and changes the traffic form and traffic consciousness. We say that traffic ecological organization is the internal reason for the development of traffic culture, and ecological landscape is the external restrictive factor for the development of traffic culture. The purpose of studying the ecological mechanism of traffic culture is to build an ideal model of green traffic ecology, that is, orderly and harmonious traffic cultural ecological landscape and efficient and perfect urban ecological organization.

#### 5. Urban green traffic and its characteristics

As an important goal in the new era, ecological urban construction, building a fast, efficient, safe, comfortable and environmental friendly urban green transportation network, and gradually building and improving green transportation systems such as road construction, passenger and freight transportation system and traffic control, is an important symbol to measure the level of urban modernization.

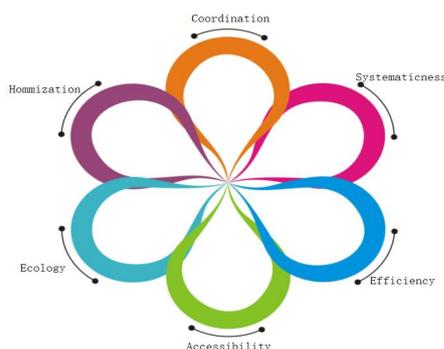


Fig. 3 Green Ecological Traffic Characteristics

Green transportation is a new concept proposed for a series of traffic problems in the process of urban and urban traffic development. Highlight the "green" of urban traffic, that is, green traffic that reduces environmental pollution, reduces traffic congestion, promotes social equity and reasonably develops resources. Green transportation generally refers to the use of transportation tools with low pollution, low energy consumption and suitable for urban environment to complete the economic activities of social production and meet the green ecological concept of sustainable development. The best mode of urban transportation in China is sustainable green ecological transportation, which has the following characteristics, as shown in Figure 3:

- (1) Coordination: adapt to social and economic development, coordinate and unify with ecological and environmental protection, and meet the needs of urban residents for life and transportation service quality.
- (2) Systematicness: meet the comprehensive development requirements of economy, society and ecology, highlight the overall sustainable development, pay attention to the design of comprehensive transportation system such as system function complementarity, information transmission and sharing, network configuration integration, and give full play to the important role of urban transportation network interconnection.
- (3) High efficiency: provide fast, smooth, safe, reliable, comfortable, multi node, multi grid and other powerful high-quality transportation services to realize the rapid switching between multi modes and achieve the purpose of high efficiency.
- (4) Accessibility: build an urban road traffic network system with high efficiency, coordination, sufficient mobility, accessibility and accessibility, and realize the spatial displacement of people and things within a certain range through resource allocation such as urban planning, land development and infrastructure construction.
- (5) Ecology: ensure the sustainable development of urban transportation system, meet the green needs of low energy consumption, low consumption and low pollution, and provide strong support for the orderly and healthy development of urban economy and society.
- (6) Humanization: adopt humanized traffic management and establish an efficient, comfortable, environment-friendly and people-oriented urban green traffic mode. Starting from people's actual needs, pay attention to people's physical and mental health, pay attention to social justice and fairness, provide a variety of choices for urban residents' travel through the humanized link between various transportation modes, and give priority to the development of urban green transportation.

## 6. CONCLUSION

With the rapid development of social economy, urban traffic has become more and more congested, especially the pollution of urban traffic has become a stubborn disease that is difficult to solve[4]. "Green transportation" came into being. From the perspective of scientific management of road traffic, social and economic activities should be completed by developing low pollution transportation modes, in order to reduce traffic congestion and environmental pollution. Urban traffic is not just an economic phenomenon, but the existing form of cultural phenomenon, which is called traffic culture. Culture is also humanized. Human beings use wisdom to gradually change the living state of all things in the world and enrich the cultural process of the world based on their own needs. Therefore, traffic culture has a positive impact on urban traffic development in terms of ecological mechanism, and is very important to the development of urban culture and regional economy. The development of green transportation fully shows the operation law of transportation cultural ecological mechanism. For the cultural landscape, environmental transformation and optimization of transportation cultural ecological organization in the construction of transportation facilities, it greatly reduces the pollution caused by transportation and realizes green transportation. By constructing the concept culture of urban green traffic construction, this paper further expounds that traffic culture plays a greater role in China's modern urban traffic construction.

## ACKNOWLEDGEMENTS

This paper is the main research results of the research project of philosophy and Social Sciences in Colleges and universities in Jiangsu Province (Item Number: 2019SJA0655) and the academic leader project of school Blue Project (Item Number: RCQL18210).

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