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### Research On the Talent Training Mode of Innovation and Entrepreneurship Education in Higher Vocational Colleges in the New Era

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Abstract: The emergence of "Internet +entrepreneurship" as a new form of entrepreneurship is promoting the innovative development of my country's economy and society. At the same time, under the background of "Internet +", it also puts forward higher requirements for innovation and entrepreneurship education vocational colleges. in Correctly understanding and analyzing the current situation of innovation and entrepreneurship education in higher vocational colleges in the "Internet +" era, and comprehensively carrying out effective innovation and entrepreneurship education reforms to adapt to the impact of the transformation of my country's economic development mode under the background of "Internet +" is the current situation of higher vocational colleges. An urgent task facing the school.

Keywords: Higher vocational colleges; Innovation and entrepreneurship education; Talent training mode

#### 1. CURRENT STATUS OF INNOVATION AND **ENTREPRENEURSHIP EDUCATION** IN **HIGHER VOCATIONAL COLLEGES**

1.1 The direction of employment is traditional, and the concept of innovation and entrepreneurship education is backward. the entrepreneurial activities of college students are mostly concentrated in tutoring, retail and service industries, while the rate of applying "Internet +" thinking to start a business is low, and the technological innovation of entrepreneurship is insufficient. If the "Internet +" thinking is combined with professional ability to make entrepreneurial choices and improve technological innovation, it will help improve students' comprehensive abilities.

1.2 Innovation and entrepreneurship education lacks a clear and feasible positioning plan

Higher vocational education needs to be reformed, combining "Internet +" thinking with innovation and entrepreneurship education, making a scientific and reasonable positioning plan, continuously improving students' innovation awareness, and forming an innovation and entrepreneurship education talent training model based on "Internet +" thinking.

1.3 Teacher structure is unreasonable

Most of the teachers are academic experts, lack of entrepreneurial experience and practical ability; and because of professional limitations, there is a big gap between teachers of different majors in understanding and application of "Internet +" thinking. Therefore, under the background of the new era, it is urgent to

infiltrate the "Internet +" thinking into the professional setting and strengthen the construction of the teaching staff.

#### 2. EXPLORATION OF THE TRAINING MODE OF INNOVATION AND ENTREPRENEURSHIP **EDUCATION** TALENTS UNDER THE **BACKGROUND OF "INTERNET +"**

As the Internet, artificial intelligence, big data and other technologies have more and more impact on human social life, many industries and fields pay more attention to intelligent manufacturing, so as to replace low-skilled labor-based repetitive work, so as to realize industrial intelligence. With the development of globalization, many enterprises have transformed into the Internet industry. Therefore, higher vocational colleges should cultivate students' "Internet +" entrepreneurial ability in a targeted manner, so that they have the opportunity to participate in the wave of innovation and entrepreneurship, and effectively improve their entrepreneurial practice ability to adapt to the transformation of my country's economic development mode in the "Internet +" era. the ever-changing employment environment brought about. [1]

2.1 Clarify the training objectives so that "Internet +" innovation and entrepreneurship education runs through the whole process of students' learning

Different from the short-term fast-track employment training classes aimed at solving survival problems in the society, higher vocational colleges should incorporate innovation and entrepreneurship education into their talent training programs, reform the talent training model and curriculum teaching system, and make "Internet +" innovation and entrepreneurship education run through the whole process of students' learning organically integrates the quality and literacy required for entrepreneurship in the "Internet +" era into the talent training program.

Adopt a differentiated talent training model that consolidates professional basic capabilities. strengthens core capabilities in professional directions, and matches professional positions and selfemployment. In the first academic year, students' professional foundations are consolidated, public courses and vocational basic courses are offered, and students are guided to carry out scientific career planning; in the second academic year, students' professional core abilities and innovation and entrepreneurship abilities are strengthened; in the third academic year, there are two periods, focusing on To

carry out targeted guidance on employment and entrepreneurship for students, help students who do not have entrepreneurial intentions learn to find employment with an entrepreneurial attitude, and help students who have entrepreneurial intentions learn to realize rational entrepreneurship in an uncertain environment, so that students have stronger the competitiveness of job hunting and employment and innovation and entrepreneurship.

2.2 Optimizing the course structure system and structuring the entrepreneurial competition and professionalism

Entrepreneurship competition is an important way to promote the development of innovation and entrepreneurship ability of vocational college students. [2] the competition can not only test students' professional and vocational skills, but also cultivate and exercise students' professional quality and other comprehensive qualities. Therefore, innovation and entrepreneurship education will always run through the major in the curriculum structure.

The first year focuses on theory guiding practice. Courses such as Situation and Policy, Career Planning and Employment Guidance, Information Retrieval, Communication and Speech are offered to give students a preliminary understanding of innovation and entrepreneurship. Encourage students to actively participate in the college student entrepreneurship competition organized by the college to realize "promoting learning through competition", improve students' enthusiasm for learning, and enhance their awareness of innovation and entrepreneurship.

In the second year, theory and practice are integrated into knowledge and practice. This academic year focuses on the study of professional core courses and professional skills courses, and adopts a differentiated talent training model that consolidates the basic capabilities of professional groups, strengthens the core capabilities of professional directions, and matches the specific capabilities of professional positions. At the same time, the innovation and entrepreneurship course offered in the third semester focuses on cultivating students' entrepreneurial awareness, innovative thinking, innovative and entrepreneurial spirit, and improving their innovative and entrepreneurial literacy, so that students can consciously use entrepreneurial thinking to guide their personal study, life and entrepreneurial practice. Through learning, students can become familiar with the business model, improve their understanding of the connotation and model of entrepreneurial teams, and manage the professionalism build and of entrepreneurial teams.

2.3 Enrich teaching resources and reform teaching methods to realize the combination of competition and teaching

2.3.1 Blended teaching realizes resource sharing

It is convenient for students to self-study at any time. the college makes full use of the "Internet +" new format to build and equip a teaching resource library related to innovation and entrepreneurship education. Establish a dual-tutor guidance system for enterprise engineers and school teachers, carry out "enterpriseschool dual-master sportsmen", and carry out teaching in the form of a combination of online, offline and enterprise practice classroom teaching.

2.3.2 Reforming teaching methods by using competitions to promote teaching

Taking the opportunity of the Innovation and Entrepreneurship Competition, actively carry out teaching reform and innovation, promote the classroom revolution, realize the transformation and upgrading of education informatization, and emphasize the all-round and deep integration of information technology and education and teaching. Actively promote the connection between innovation and entrepreneurship competitions and professional teaching, infiltrate the classroom competition projects into teaching. implement teaching modes such as "task-driven, group collaboration", "competition example, student-aid teaching", and strengthen the innovation and entrepreneurship teaching mode. [3]

2.4 Cross-border integration of industry and education to build a business incubator

By introducing skilled craftsmen from industrial enterprises to teach or work part-time in the college, we will promote mutual employment between schools and enterprises, and jointly build and share the teaching team. the school and enterprise jointly build an entrepreneurial incubation base, and establish and improve the talent training model of dual education and school-enterprise cooperation.

Long-term employment of regional industry "experts" to participate in school curriculum development, and jointly formulate talent training programs. Based on the curriculum design principle of "based on the curriculum corresponding to the job post work process", we will build an entrepreneurial incubation base with enterprises, analyze and decompose the real enterprise project content, integrate the knowledge, ability and quality objectives of the course into the teaching tasks, and consolidate Students' professional knowledge and skills, cultivate students' innovative and entrepreneurial ability.

This kind of teaching plan design for individualized training of students organically integrates enterprise production projects into the comprehensive practice of innovation. It can not only develop entrepreneurial projects based on market-driven innovation, but also give full play to the main role of students and actively participate in competitions for students. Create conditions to guide and promote students to think, discover, and explore new ideas for innovation and entrepreneurship.

#### **3. CONCLUSIONS**

Under the background of "Internet +", innovation and entrepreneurship education in higher vocational colleges can only explore new ways and channels for the "Internet +" era by opening up new directions and channels, enhancing students' ability to capture entrepreneurial opportunities, and combining traditional entrepreneurial methods with the Internet. A new innovation and entrepreneurship education model.

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### Research On the Construction of Diversified Cooperative School Running System in Higher Vocational Education

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Abstract: Higher vocational education is a component of higher education, although after a long time of development has made some achievements, but there are still some shortcomings, the establishment of a diversified school system suitable for the development of higher vocational education, can stimulate the vitality of higher vocational education. Based on this, this paper starts with the objective conditions and existing problems of the construction of the diversified cooperative school running system of higher vocational education, and discusses the construction of the diversified cooperative school running system of higher vocational education for reference.

**Keywords:** Higher vocational education; Diversified cooperation; School-running system; Construct

#### **1. INTRODUCTION**

To develop higher vocational education, it is necessary to adhere to the requirements of vocational education, take employment promotion as the fundamental, comprehensively promote the cooperation between schools and enterprises, strengthen the connotation construction of colleges and universities, reform the personnel training mode, build a diversified cooperative school running system, and strive to improve the teaching quality and level of higher education.

#### 2. OBJECTIVE CONDITIONS FOR THE ESTABLISHMENT OF DIVERSIFIED COOPERATIVE SCHOOL RUNNING SYSTEM IN HIGHER VOCATIONAL EDUCATION

Constructing a diversified school running system in higher vocational education can meet the new requirements of national vocational education reform and the development requirements of market economy, which is conducive to the realization of the development goals of higher vocational education itself. the details are as follows:

2.1 Adapt to the new requirements of national vocational education reform

In the development plan of higher vocational education set up by the Ministry of Education, it is required that higher vocational education should accelerate the innovation of the system, attach importance to the cooperation between schools and enterprises and the integration of study and technology. Therefore, the establishment of multiple cooperative school running system of higher vocational education can make more capital and resources from industries and enterprises join in the teaching process of higher vocational education, so as to create a new situation of Taiwan education.

2.2 Comply with the requirements of market economy development.

Under the planned economy system, our traditional vocational education is generally dominated by government resources to run a school, and the setting of major, the arrangement of teaching tasks and so on are mostly carried out according to the country's development requirements. Under the market economy system, it is necessary to adapt to the requirements of the development of market economy by diversifying the main body and forms of running schools.

2.3 It is conducive to the realization of the development goal of higher vocational education itself.

The characteristics of higher vocational education are outstanding in all aspects of the school running system and operation system. Vocational colleges are required to carry out industrial planning, fund raising, technology research and development in combination with their own development goals. Through the construction of a diversified school-running system, higher vocational colleges can absorb more teaching resources, broaden the channels of funding sources, build a cross-industry and cross-region education mechanism, so as to achieve better development.

3. AT PRESENT, THE DIVERSIFIED **COOPERATIVE** RUNNING OF HIGHER **VOCATIONAL EDUCATION FACES PROBLEMS** At present, higher vocational education generally faces some problems, such as unclear orientation, crossover of major and curriculum, and unoutstanding features. Whether higher vocational colleges can accurately and scientifically position is the premise of successful education, which is related to the development plan of colleges and universities. Higher vocational education itself is application-oriented technology education, but due to the limited experience in running schools, limited ability and so on, there is also a lack of mature education model for reference in China. Many higher vocational colleges will look to ordinary colleges and universities and design relevant majors and courses according to the template of ordinary colleges and universities. There are some higher vocational colleges do not combine their own specific conditions, blindly declare the more hot professional in the society, and the relevant supporting facilities, equipment, teacher level and so on can not meet the teaching requirements.

#### 4. ESTABLISHMENT OF DIVERSIFIED COOPERATIVE SCHOOL RUNNING SYSTEM IN HIGHER VOCATIONAL EDUCATION

4.1 Diversified subjects of higher vocational education In the new era, people have higher and higher requirements for higher education. In this situation, the school-running mechanism relying solely on government investment can no longer meet the social requirements, because the capital investment of the state is limited after all, so the diversification of schoolrunning mechanism is needed for the development of the Times. the details are as follows:

First, the state and private sectors. In other words, the state and government provide land and some infrastructure, and give it to social organizations or individuals with legal status to operate educational institutions as required by law. the undertaker of the school raises funds in accordance with the legal requirements, and undertakes the goal of personnel training.

Second, education group. Education group to solve the problems of fund investment, infrastructure and other aspects, and the responsibility of school leaders is to do a good job in teaching, education group has a certain responsibility.

Third, the university town system. University town is a new form of running a school in recent years, which has two modes: enterprise preparation and government leading. Among them, the establishment of enterprises refers to the development of real estate, logistics and other related services, colleges and universities according to their own needs to rent; In other words, some basic public facilities and planning tasks are undertaken by the government, while others are absorbed by the government in the form of bidding and sharing of corporate capital.

4.2 Diversification of talent training objectives in higher vocational education

In the diversified school running system of higher vocational colleges, the diversification of talent training objectives is directly related to the district and city economy, modernization level, etc., which requires higher vocational colleges to consider the requirements of the society for talents when running schools, specifically as follows:

First, higher vocational colleges should update their own educational ideas, accurately control the development requirements of market economy, absorb more social resources, and organize a series of teaching activities according to the requirements of diversified talent education.

Second, in the management system of higher vocational colleges, it is necessary to establish the corresponding education management system in combination with the diversified needs of talent training and education. For private or foreign-registered higher vocational colleges, it is necessary to build a board of directors leadership system for the school and investors, use the market management system for talent management, establish campus practice base or off-campus practice base with the help of social resources, and improve the post ability of students of various majors.

4.3 Diversification of management evaluation system of higher vocational education

In the construction of the diversified school running system of higher vocational education, higher vocational colleges should put the key points of management on the supervision level of diversified vocational ability and specialty setting based on their school running goals and requirements, and actively establish the diversified management evaluation system of higher vocational education, specifically as follows:

First, in the operation mechanism of higher vocational colleges, in order to highlight the advantages of schools at all levels and ensure the legitimate rights and interests of each investor, we should scientifically sort out the various resources of the school and colleges at all levels, respectively conduct management evaluation, and use the classified operation, guidance, check and evaluation thoughts to realize the timely and efficient sharing of various resources.

Second, we should establish a sound collective management mechanism of vocational education, carefully study and analyze the requirements of vocational ability of each major in our school, and establish the teaching curriculum design of each major. Higher vocational colleges should quantify the requirements for the assessment of professional ability of each specialty and build a supervision and inspection system that meets the characteristics of vocational education, which can not only assess the teaching ability of teachers, but also assess the learning situation of students.

#### 5. CONCLUDING

In short, if our higher vocational education wants to make a great breakthrough in the school system, it is necessary to ensure the diversification of school subjects, personnel training objectives and management evaluation system with the help of the government, enterprises and other parties, so as to promote the sustainable and healthy development of higher vocational education.

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### Research On the Application Of 5G Technology in the Construction of Trauma First Aid System

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**Abstract:** The effective treatment of early trauma is very key, reasonable and perfect trauma first aid system, can ensure that trauma patients in the shortest time to get reasonable and effective treatment, so as to reduce the probability of death. the reasonable application of 5G technology in the construction of trauma first-aid system can further enhance the first-aid capacity. This paper first makes a brief introduction to trauma first aid, and based on this, respectively from the field information acquisition, first aid resources, first aid command and other aspects of the application of 5G technology in the construction of trauma first aid system to further improve the level of trauma first aid system construction.

Keywords: 5G technology; Trauma first aid;; System construction

#### **1. INTRODUCTION**

5G technology has the advantages of low delay, high speed and wide connection, and its application in trauma first aid activities can promote part of the emergency work to move forward effectively, and make the hospital immediately after getting on the bus, which has extremely important value and significance for seizing the golden time and saving the lives of patients. Therefore, it is necessary to conduct in-depth research on the application of 5G technology in the construction of trauma first aid system, so as to ensure that 5G technology can play its due role in trauma first aid work. **2. OVERVIEW OF TRAUMA FIRST AID AND 5G TECHNOLOGY** 

#### 2.1 Trauma First Aid

Trauma is the destruction of the structure and function of human tissues and organs due to mechanical factors. Including sprain, contusion, cut, avulsion injury, etc., with the continuous development of domestic industry and agriculture, transportation and sports, the incidence of trauma is also increasing year by year, and trauma first aid is a series of emergency treatment measures for trauma collectively. As the mechanism of trauma is generally complex, involving multiple organs or systems, and the injuries can affect each other, it often has a high fatality rate and disability rate. If patients can receive timely and effective treatment within 1 hour after injury, not only can the survival rate of patients be greatly improved, but also the occurrence probability of various complications can be further reduced. It is of great value and significance to build a reasonable and perfect trauma first aid system so that the trauma

patients can recover to the state of health to the greatest extent.

#### 2.2 5G Technology

5G technology is short for the fifth generation of mobile communication technology. Compared with the previous generation of communication technology, that is, 4G technology, 5G technology has the characteristics of high speed, low delay and large connection. It belongs to the latest generation of communication technology that can effectively realize the efficient interconnection of people, machines and things. the application of this technology in trauma first aid activities can not only provide high-quality communication functions, but also provide various functions such as real-time collection and transmission of various data information, real-time positioning and telemedicine, which has important value and role in improving the effectiveness of trauma first aid work [1]. 3. RESEARCH ON THE APPLICATION OF 5G TECHNOLOGY IN THE CONSTRUCTION OF TRAUMA FIRST AID SYSTEM

3.1 Application in the field of information acquisition in trauma first aid

Timely and accurate acquisition of various types of information on the scene of trauma first aid is a key content in the process of trauma first aid system construction. Whether these information can be timely and accurate acquisition is related to the overall dispatch efficiency and first-aid effectiveness of 120 emergency centers. the acquisition of on-site information of trauma first aid can be realized through a series of mobile intelligent terminals based on 5G.

For example, the scene information and location information of the trauma incident can be positioned and filmed by the 5G smart phone and HD camera carried by the relevant distress seeker, and can be rapidly transmitted by the 5G network. Finally, it can be displayed on the monitoring screen in the emergency center and hospital, which can help the emergency center accurately lock the location and quickly organize rescue activities.

In addition, with the help of smart wearable devices based on 5G technology, including smart bracelets and RFID wristbands, a series of basic information such as body temperature and pulse of trauma patients can be timely acquired. A series of portable data acquisition devices in emergency vehicles based on 5G technology can also realize the rapid collection of a series of vital sign information of trauma patients, which can provide support and help for the efficient implementation of trauma emergency work.

3.2 Application in emergency medical resources

For trauma first aid work, the core content is to help trauma patients receive the most appropriate and effective medical resources in the shortest time, and 5G technology can play an important role in the effective integration of regional medical resource information, which commonly includes the specific available quantity and location information of hospital medical resources and social medical resources.

For example: the hospital can build a regional database of emergency volunteers or a related system platform in advance. Then, after receiving a call for help from a trauma patient, the emergency center can lock the location of the patient with the help of 5G technology, and match the nearest volunteer in the database or platform for support through an intelligent terminal based on 5G technology. Due to the characteristics of wide connection and low delay, 5G technology can fully help volunteers arrive at the scene for emergency treatment in the shortest time, which can further improve the efficiency of pre-hospital trauma emergency treatment [2].

3.3 Application in patient health information sharing

In terms of patient health information, it mainly involves basic information collected and registered by relevant medical staff and vital signs of trauma patients, as well as a series of hospital file information such as their previous medical history, medical records and basic diseases. A series of intelligent terminals based on 5G technology can help medical staff share the basic information of various patients they have mastered and transmit the vital signs information of trauma patients, which can help medical staff in the hospital to carry out accurate diagnosis of trauma patients' conditions, so as to prepare for the corresponding medical treatment activities. It is helpful to greatly improve the efficiency and quality of treatment [3].

3.4 Application in traffic information

Timely and effective sharing of traffic information is very important for trauma emergency work. Through 5G technology, the hospital emergency center can effectively cooperate with the transportation department to realize real-time query and sharing of road traffic information. Meanwhile, combined with the corresponding artificial intelligence technology, the route from the emergency scene to the hospital can be automated and intelligent planning and recommendation, which helps to quickly find the optimal route. Make sure the ambulance gets to the hospital in the shortest possible time. Moreover, based on 5G technology, the transportation department can also timely remove obstacles for ambulances, such as: In 2019, Jiujiang Rescue Center, in collaboration with the traffic department and Baidu Map, effectively created the "blink screen" function based on 5G technology, so that all vehicles using Baidu Map within 1.5km of the ambulance during emergency treatment can directly receive voice reminders and screen flashing prompts. This provides strong support and help for avoiding the ambulance.

#### 4. CONCLUSION

To sum up, the main purpose of building a trauma first aid system is to ensure that trauma patients can receive reasonable and effective first aid at the first time, so as to reduce the mortality and disability rate. the reasonable and appropriate application of 5G technology in the construction of the trauma first aid system can improve the trauma first aid ability from many aspects and contribute to the further improvement of the efficiency and quality of the trauma first aid work. To this end, the article makes an in-depth exploration of trauma first aid system, so as to help the trauma first aid work achieve high-quality development.

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# The Aesthetic Characteristics of Music Art of Digital Native Generation and Its Cultivation

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Abstract: Informa ionization, intellectualization and digitalization are the development trend of modern society. the new generation under the background of this era can be called digital native generation, which is the leading role of digital music art. Digital natives have obvious characteristics in music aesthetics, which are mainly reflected in music types, music appreciation objectives, music appreciation media and so on. This paper takes the aesthetic characteristics and cultivation of digital native music art as the research object, carries out a detailed analysis and exploration, in order to share and exchange with related industry personnel.

**Keywords**: Digital native generation; Music art aesthetic; Cultivation strategy

#### **1. INTRODUCTION**

The application of science and technology in the field of music art has changed the production mode of music content, changed the communication form of music art, changed the style type of music art, and injected fresh vitality into the development of music art. Based on the performance of the digital native generation on the aesthetic characteristics of music art, the field of music teaching needs to correctly understand the digital native generation's understanding of music art, and innovate the music aesthetic cultivation methods suitable for the digital native generation in practical teaching, so as to ensure that the digital native generation can form the music literacy and ability to adapt to the development of modern society.

### 2. THE AESTHETIC CHARACTERISTICS OF MUSIC ART OF DIGITAL NATIVES

Different times, ideological understanding, behavior habits will also be different, from the perspective of music art development, different times will lead to different musical art aesthetic perspective, will also form different, diversified musical art aesthetic characteristics. Taking the new generation living in the age of information technology, intelligence and digitalization as an example, it mainly forms the following characteristics in the aesthetics of music art: 2.1 Pop music has become the main type of music

According to relevant survey data, different age groups like different types of music, and digital natives obviously show aesthetic characteristics of liking pop music. As digital natives have become the protagonist of the current era, pop music has become the main type of music in this era [1]. Compared with traditional music, popular music has obvious advantages, especially in the commercial, industrial, entertainment, industrialization, dissemination range and other aspects of music, which is the inevitable trend of the development of the digital age, and also the main characteristics of the digital native music art aesthetic. For example, in the context of the development of modern society, pop music can be seen everywhere, including movies, advertising, singing competitions, TV programs, radio, etc., which indicates that pop music exerts a subtle influence on digital natives.

2.2 The Internet and mobile phones have become the main media of music communication

The change of access to music can also reflect the aesthetic characteristics of music art of the digital native generation, especially in the aspect of music communication media. In the digital era, information devices such as the Internet and mobile phones have become the main way to appreciate music art. Compared with the traditional forms of music communication, the digital native generation has better conditions. For example, traditional music communication is mainly based on tape, tape recorder, CD and other tools. This kind of communication media has certain limitations, and it is difficult to meet the needs of audiences for music art [2]. Digital natives use the Internet, mobile phones and other devices to enjoy music. They can query, download, delete and listen to music online according to their own preferences and needs on the music website platform. This form of music transmission is more convenient, efficient, creative, technical and other advantages, which provides superior music art appreciation conditions for digital natives to a certain extent. In aesthetic characteristics naturally superior to the traditional form of music communication. 2.3 Independent music learning and personalized music appreciation have become the main forms

There are limitations in traditional music art appreciation and aesthetic teaching, especially in music resources and music presentation forms. Traditional music is difficult to meet the learning needs of digital natives. First of all, the advent of the digital era has made the rapid rise of digital music, and under the support of Internet technology, a large number of music resources have been formed, which has created favorable conditions for music classroom teaching. For example, in music teaching, students can carry out independent music learning through the Internet. Students only need to master network information technology to download music and complete independent music learning through the Internet. At the same time, social software such as "QQ" and "wechat" can also provide students with conditions for information exchange. Students can share their favorite music with other students and even interact with music creators, which plays a very important role in improving students' aesthetic ability of music art. Secondly, digital natives have personalized aesthetic characteristics in music appreciation. For example, digital natives can play, download and collect music according to their own preferences on the Internet, and they can also make their own music playlists, which has played an important support for the digital generation to form a personalized music aesthetic.

2.4 Love and encouragement become the main content orientation of music

Contemporary college students belong to the group of digital natives. Through the investigation and analysis of college students, it is found that most of them like love and inspirational music, which means that the content orientation of music has changed greatly, and of course, it also reflects the aesthetic characteristics of music art of digital natives. Take the song "Glory Days" for example, many college students can hum a few words, and they like the melody and lyrics of the song very much. Some college students even take the song as the "theme song" of their life. This phenomenon shows that digital natives have their own unique views on music.

2.5 Catharsis emotion becomes the main purpose

Digital natives live in different environments and times, and most of them have avant-garde ideas and unrestrained ideas, which are the ideological characteristics of digital natives. Therefore, digital natives will show distinctive characteristics in music art aesthetics. Taking contemporary college students as an example, they are faced with a variety of pressures, such as academic pressure, life pressure, emotional pressure, job hunting pressure, etc., which causes great ideological pressure of college students. College students in urgent need of releasing pressure will choose music and place their emotions in music, which is also the reason why pop music can resonate with digital natives. Thus it can be seen that emotional catharsis is the main feature of digital native music art aesthetic.

### **3. DIGITAL NATIVE MUSIC ART AESTHETIC CULTIVATION STRATEGY**

Based on the aesthetic characteristics of music art of digital native generation, the reform and innovation should be implemented in the field of music teaching in order to create the most suitable environment for the development of music literacy for students. Different cultures in different times have different connotations. If the old culture is forcibly implanted into the minds of students in the new era, there will be a serious rejection reaction, so is the aesthetic cultivation of music art. Digital natives live in different times and have different understandings of music art. Teachers should try to accept this problem and try to redefine the connotation of mainstream music from the perspective of digital natives. Under normal circumstances, concerts change with the development of the Times, for example, in the early years of New China, the theme of patriotism, struggle, dedication music is the mainstream music, in the field of music teaching naturally become the main content of teaching. With the advent of the digital age, the digital new generation has become the protagonist of social development, and the music type favored by this group will also become the mainstream music of the current era. Therefore, teachers can take pop music as the main content of teaching, and adopt teaching strategies in line with the aesthetic characteristics of the digital native music, so as to help the digital native generation to form good music literacy.

#### 4. CONCLUSION

To sum up, the aesthetic appreciation of music art of digital native generation is different from that of previous times, showing obvious aesthetic characteristics of difference. Therefore, in the field of music teaching, it is necessary to adopt teaching strategies in line with the development trend of contemporary music art in the cultivation of aesthetic literacy, and only in this way can a music teaching environment suitable for digital native generation be created.

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### The Relationship Between International Chinese Education and the Community of Shared Future for Mankind

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Abstract: Language is a tool of social communication. It is a bridge to express the will and obtain the will of others. Therefore, communication between people and countries all need to rely on the subject of language. In the context of global integration, each country is no longer an independent individual, but a community with gradual integration of economy, ideology, politics and culture. To better promote direct cooperation and exchanges between countries and ensure the health and stability of the world's common environment, we must realize mutual communication in language, just as our country takes English as a basic course. Due to the rapid rise of China's influence in the world, the international community has set off a wave of Chinese learning, and even some countries take Chinese as the second language. In this case, the international Chinese education has obtained a good development opportunity, and gradually formed a close relationship with the community of human destiny. This paper makes a comprehensive analysis and exploration of the relationship between international Chinese education and the community of human destiny, with a view to sharing and communicating with people in the industry. Keywords: International Chinese education; A community with a shared future for mankind; Coexistence and symbiosis; Share and win

#### **1. INTRODUCTION**

The community of shared future for mankind is an advanced and scientific value concept. It mainly means that countries should take into account the reasonable needs of other countries while pursuing their own interests, and promote the common development of other countries while pursuing their own development. There is only one earth and all countries belong to the same world. They should have the ideology of building a community with a shared future for mankind and focus on harmonious coexistence and win-win cooperation. Only in this way can they protect and build a world environment suitable for the survival and development of all mankind. Language is a basic tool for mutual understanding between people and countries, and a bridge for the organic integration of different cultures and ideas. Only by overcoming language barriers can we achieve the goal of universal coexistence and win-win development. In this regard, China, as the only country in the world without cultural fault, and as a major country gradually occupying the discourse power in the world, should become the leader of the common values

of the destiny of mankind, which requires showing the Chinese culture, spirit and ideology to the world through language, and giving full play to the role of coordinating the relations between countries in the world. This will provide strong support for building a harmonious and stable world. As a subject of Chinese studies, international Chinese language education plays a very important role in the field of international Chinese language teaching and international Chinese language promotion. Under the concept of the community of human destiny, international Chinese language education needs to carry out reform and innovation in order to lay a solid foundation for the development of Chinese language internationalization.

#### 2. LANGUAGE AND COMMUNITY: FROM THE PERSPECTIVE OF MARXISM TO THE COMMUNITY OF HUMAN DESTINY

From the perspective of Marxism, it makes a relatively reasonable explanation of language, pointing out that language is the product of the community and can also be regarded as a part of the community, so there is a close relationship between language and the community of human destiny. First of all, the community plays a decisive role in language, which is difficult to exceed the practical limits of the community. Secondly, language plays a basic role as a social communication medium, which can promote the growth and development of the community. For example, in the context of global integration, people of all countries belong to the same world. In order to achieve cultural and economic cooperation, language must be used as social media, so as to promote the stable development of the entire human community of shared future [1]. Under the background of the Sinicization of Marxist thought, the value concept of the community with a shared future for mankind presents obvious Chinese characteristics, which is the collision between the idea of "one family under the world" and the colonial culture of the law of the jungle. China adheres to the cultural logic of "sharing beauty and prosperity" in international exchanges, and it can be said that China has demonstrated the value concept of the community with a shared future for mankind incisively and vividly. As a major force in the international promotion and teaching of Chinese, international Chinese education is inextricably linked with the community of shared future for mankind. In addition, from the perspective of language functions and tools, international Chinese education is mainly to teach Chinese to non-native Chinese learners, which is not only a language teaching activity, but also a cultural and ideological output activity. Chinese learners not only master a communication skill, but also acquire the edifying of excellent culture and ideas. This has played a vital role in publicizing and promoting Chinese culture and political thought.

**3. CO-EXISTENCE: THE THEORETICAL BASIS** OF MULTIPLE TWO-WAY COMMUNICATION One world shares one dream. Is the slogan of the 2008 Beijing Olympic Games, it reflects our understanding of a community of shared future for mankind and it shows our determination to build a harmonious world. Based on the connection between international Chinese education and the community of shared future for mankind, China should do a good job in international Chinese teaching and promoting Chinese language in an all-round way, and spread the idea of coexistence and symbiosis around the world with Chinese education. Chinese culture is characterized by inclusiveness. International Chinese education should draw on the excellent cultures and traditions of other countries while exporting to the outside world, so as to achieve the goal of multi-directional communication [2]. Language is a bridge connecting members of a social group and a common tool for communication within the same group, so language symbolizes a group to some extent. Coexistence has put forward new requirements for language development. Language should be compatible and permeable, which is the key to build a community of shared future for mankind. For example, every country has its own language accompanied by unique culture and ideas. Coexistence indicates that language should form a pluralistic pattern and two-way communication, so as to ensure that different cultures and ideas can coexist and provide support for the development of values of a community with a shared future for mankind. In a sense, language can reflect whether a country is powerful or not. the reason why English is widely used in the world lies in that Britain was very powerful in modern history and advocated the idea of invasion and colonization. Nowadays, as China's comprehensive strength increases and the world's discourse power increases, Chinese language will be further internationalized. This is completely different from the internationalization of English. Therefore, international Chinese education should adhere to the values of the community of shared future for mankind and lay a solid foundation for diverse and two-way exchanges.

### 4. SHARING AND WIN-WIN: AS A CONCRETE CONFIRMATION OF PUBLIC GOODS

From the perspective of the community of human destiny, language is a universal public product and can

be regarded as a concrete confirmation of the win-win and sharing of the community of human destiny. International Chinese education is of great significance and value to the realization of one world and one dream by spreading China's idea of great harmony to the whole world and integrating China's excellent cultural traditions with the cultures of other countries. With the accelerated development of global integration, the international Chinese education shoulder more and more heavy responsibilities. Taking Chinese as the carrier of China's construction of a harmonious world, more and more countries can accept Chinese and Chinese ideas. China can play a series and radiation role in the trend of global integration, and more countries can form unified ideas and unified values through Chinese. This is of great significance to achieving win-win outcomes across the board. Therefore, China should carry out reform and innovation in the field of international Chinese language education, commit itself to building a more scientific and reasonable system of international Chinese language education and international Chinese language promotion, so as to spread the value of the community of human destiny to the whole world.

#### 5. CONCLUSION

To sum up, guided by the vision of a community with a shared future for mankind, China's exchanges and cooperation with other countries have risen to a new height, and a world development pattern featuring coexistence and win-win benefits has been gradually established. Due to the connection between the international Chinese education and the community of human destiny, our country needs to accelerate the process of international Chinese education reform, so as to spread our culture and ideas around the world through Chinese.

#### ACKNOWLEDGEMENTS

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### Analysis On the Cultivation Strategy of Innovation and Entrepreneurship Ability of Higher Vocational College Students Under the Digital Economy

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Abstract: Under the background of the new economic form marked by the digital economy and "mass entrepreneurship and innovation", higher vocational colleges urgently need to cultivate a group of highquality technical and technical talents who meet the development requirements of the digital economy and have the ability to innovate and start businesses. In view of the current problems in innovation and entrepreneurship education, higher vocational colleges should build a systematic top-level design of "education-teaching" horizontal connection, а vertically-penetrated professional education system of group-professional-course" "professional and "secondary education system". the refined management system of three-dimensional linkage of college-teacherstudent further improves the quality of innovation and entrepreneurship education in higher vocational colleges and serves the high-quality development of the digital economy.

**Keywords:** Digital economy; Higher vocational colleges; Innovation and entrepreneurship

#### **1. INTRODUCTION**

In the face of digital transformation, all walks of life urgently need more high-quality, innovative technical talents as support, which provides new opportunities for the high-quality development of higher vocational education. the development of the digital economy has injected new vitality into my country's economy, and also provided new flexible and independent employment forms such as platform economy and new media, which has brought new opportunities and challenges to employment and entrepreneurship education in vocational colleges. [1]

Based on the above background, based on the new economic situation, higher vocational colleges strengthen the cultivation of students' innovation and entrepreneurship ability, which is of great significance to promote the cultivation of talents in the digital economy and strengthen the connotation construction of vocational education. From the perspective of talent training quality, strengthening the cultivation of students' innovation and entrepreneurship ability can improve the quality of graduates' innovation and entrepreneurship and meet the needs of regional economic development; from the perspective of higher vocational college governance capabilities, it can form employment and entrepreneurship linkage, education and the dynamic coordination mechanism of teaching linkage improves the ability of educational services and meets the new requirements of the digital economy for vocational education.

#### 2. THE NEW REQUIREMENTS OF THE DIGITAL ECONOMY FOR THE CULTIVATION OF INNOVATIVE AND ENTREPRENEURIAL CAPABILITIES

The rapid development of the digital economy has brought new challenges to the cultivation of innovative and entrepreneurial abilities in higher vocational education: new changes in job requirements have subverted the traditional concept of talents, and teaching content and methods have encountered information.

2.1 The openness of the digital economy requires higher vocational colleges to establish a systematic top-level design for innovation and entrepreneurship

The digital economy has a larger open system and technology platform, denser and wider resources, and more sufficient information sharing. the openness of the digital economy requires higher vocational colleges to form a systematic top-level design for innovation and entrepreneurship. In the context of the digital economy, higher vocational colleges should abandon limited thinking, and no longer regard innovation and entrepreneurship education as a subsidiary and auxiliary education, but as a key link in talent training, with the help of schools, enterprises, industries, Various platforms in the industry realize the sharing of information resources and create a value chain for the cultivation of innovative and entrepreneurial talents.

2.2 The innovation of the digital economy requires higher vocational colleges to establish a professional innovation and entrepreneurship education system

The digital economy has driven the digital transformation and upgrading of the digital industry and traditional industries, and its own innovative characteristics have also driven higher vocational colleges to cultivate innovative talents for the market and create professional innovation and entrepreneurship education resources. At present, innovation and entrepreneurship education in many higher vocational colleges is a mere formality, and there is a lack of exploration of innovation and entrepreneurship

education at the professional level. Under the requirements of the digital economy, higher vocational colleges need to establish a professional innovation and entrepreneurship education system to serve various majors and specific courses. [2]

2.3 The intelligence of the digital economy requires higher vocational colleges to establish a refined innovation and entrepreneurship management system

The basic structure of the digital economy is a framework composed of three basic elements: big data, intelligent algorithms, and computing power platforms. In particular, intelligent algorithms are the fundamental driving force for the digital economy to create value. At present, many schools do not conduct timely process tracking of entrepreneurial graduates to understand their pain points and difficulties in the entrepreneurial process, and cannot provide timely and effective help, resulting in a low success rate of students' entrepreneurship. In the context of digital governance, higher vocational colleges can mine and analyze the data of students' daily learning and life performance, grasp the dynamics of students' learning, and better assist the direction of talent training.

#### **3. STRATEGIES FOR HIGHER VOCATIONAL COLLEGES TO IMPROVE INNOVATION AND ENTREPRENEURSHIP ABILITY UNDER THE DIGITAL ECONOMY**

Based on the new needs of the development of the digital economy, based on the current situation of innovation and entrepreneurship education in higher vocational colleges, problem-oriented, on the basis of comparison of typical models and experience summary, using pedagogy, management and other theories, put forward the "education- the systematic top-level design of "teaching" horizontal connection, the professional education system of "professional group-professional-course" vertically running through, and the refined management system of "secondary college-teacher-student" three-dimensional linkage, further improve the quality of graduates of vocational colleges. the quality of innovation and entrepreneurship.

3.1 Horizontal connection of "education-teaching" to create a systematic top-level design for innovation and entrepreneurship

Innovation and entrepreneurship in the era of digital economy puts more emphasis on practicality and comprehensiveness, which poses great challenges to traditional teaching methods. This not only needs to be cultivated through professional courses, but also needs to be cultivated through various student activities such as clubs and competitions. From this point of view, innovation and entrepreneurship education is not only a matter of "teaching", but also a matter of "education". the top-level design of innovation and entrepreneurship education also needs to realize the joint development of "education-teaching". Specifically, the top-level design "education-teaching" horizontal connectivity of includes the following two aspects. One is to break through the barriers of the education and teaching department, and the other is to clarify the specific

working methods of the education and teaching department.

3.2 Vertical penetration of professional groupprofessional-course, forming a professional education system for innovation and entrepreneurship

Under the digital economy, the cultivation of innovation and entrepreneurship ability of higher vocational college students needs to be supported by professional construction and curriculum construction, and integrated into the education system. To this end, this paper proposes to create a professional education system that runs vertically through "professional groups-professionals-curriculum". There are three meanings in this, one is to take professional groups as the starting point and rely on the construction of professional groups to carry out cross-training of talents; the other is to strengthen the cultivation of professional ethics and technical skills based on the specialty itself; the target of implementation is to organically integrate the elements of innovation and entrepreneurship into professional courses, so as to better complete the practice of the overall education system. [3]

3.3 Three-dimensional linkage of "secondary collegeteacher-student" to formulate a refined management system for innovation and entrepreneurship

In the era of digital economy, the cultivation of innovation and entrepreneurship is a systematic project, not a task that a single subject can fully handle, and its management system also requires the participation of multiple subjects. To this end, higher vocational colleges need to create a three-dimensional linkage management system of "secondary colleges-teachersstudents". the implementation of specific innovation and business creation, with students as specific targets, will implement innovation and entrepreneurship into the practice of talent training programs. In the management of three-dimensional linkage, it is necessary to use data as the basis to achieve linkage and synergistic effects, better serve the top-level design and management of the school, and realize the interactive unity of digital management, digital teaching, and digital thinking. the first is to strengthen the overall management of secondary colleges, the second is to strengthen the construction of teachers, and the third is to strengthen the cultivation of students' comprehensive quality.

#### 4. CONCLUSIONS

As the main force of innovation and entrepreneurship, college students shoulder the mission of continuing to strive for national innovation. Higher vocational colleges, as local highlands for technical and skilled personnel training and technological innovation service bases, need to accelerate the construction of their own innovation and entrepreneurship education system under the new form of digital economy, so as to promote the high-quality development of vocational education, realize high-quality employment of students, and more To complete the important mission of cultivating high-quality technical and skilled talents in the new era.

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### Construction Of Kindergarten Mathematics Activities Under the Background of Preschool Connection

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Abstract: Early childhood education is an important part of our education system, is aimed at the development of young children's physical and mental enlightenment education, so the guarantee of early childhood education is reasonable and scientific, has very important significance and value. Since early childhood education is the previous stage of primary education, in order to help children, enter primary school smoothly and adapt to the primary school environment, kindergartens need to carry out the work of connecting young children to primary school, that is, to help children warm up to primary school, which mainly includes learning ability, behavior habits, ideology and so on. In this paper, how to construct kindergarten mathematics field activities under the background of preschool connection is systematically and comprehensively explored, in order to share and communicate with early childhood educators.

**Keywords:** Early childhood education; Young and young; Activities in the mathematical field; Construction strategy

#### **1. INTRODUCTION**

The construction of activities in the field of kindergarten mathematics is a teaching form that is very consistent with the law of children's physical and mental development. It can help children to form basic mathematics, mathematics, number sense and other qualities, which plays a good foundation and supporting role for children to learn mathematics knowledge in primary education. Based on the construction of mathematics activities under the background of preschool connection, it is necessary to ensure the accuracy of teaching objectives, the rationality of teaching content and the adaptability of teaching methods, so as to better play the effect of preschool connection. At the present stage, there are some problems in the construction of mathematics activities in kindergartens, such as boring teaching methods and single and limited teaching objectives, which lead to the serious "elementary school" in the connection between children and children, which not only easily affect the physical and mental development of children, but also may hinder the quality and effectiveness of children's later learning. In this regard, the construction of kindergarten mathematics activities needs to re-examine the construction direction and focus, and it is necessary to establish a reasonable connecting teaching system for

children, in order to create a suitable, efficient and scientific learning and growth environment for children. 2. THE IMPORTANCE OF YOUNG COHESION

The essence of the connection between children and children is gradual and gradual adaptation, rather than being eager to achieve results. Therefore, from the point of view of children's adaptation to the primary school environment, the implementation of the connection between children and children is of great significance and value. First of all, when children move from kindergarten to primary school, they are prone to form a huge psychological gap. If they cannot adjust their mentality in time, it will have an adverse impact on their growth and learning [1]. the bridging work can provide ideological guidance to children in advance and help them form basic learning habits, qualities and abilities through practical teaching, mainly including selfcontrol ability and self-care ability, which will lay a foundation for children to adapt to the primary school environment. Secondly, the link between children and children is also reflected in teaching, which can help children find the rhythm of primary school learning faster. For example, in the construction of activities in the field of kindergarten mathematics, teachers attach importance to stimulating children's interest in learning mathematics, as well as cultivating children's sense of mathematics and number, so that children can successfully transform their interest and mathematical literacy into the motivation and ability of primary school mathematics learning.

#### **3. PROBLEMS EXISTING IN KINDERGARTEN MATHEMATICS TEACHING ACTIVITIES**

3.1 Problems in teaching methods

Teaching method is the key factor affecting the teaching effect. A teaching method suitable for students can make the teaching result double with half the effort. From the current situation of preschool mathematics teaching, there is a mismatch in the teaching method adopted by teachers, which is mainly reflected in the following aspects: Many teachers just transfer the contents of the textbook to children without considering whether children like this teaching method, resulting in children can only passively accept knowledge. In addition, some teachers will use the way of practice teaching, requiring children in this environment can not get the fun of learning. It will be difficult to develop interest and enthusiasm for learning mathematics.

3.2 Existing problems in teaching objectives

Teaching objectives determine the direction of the whole teaching activities. Once the teaching objectives are not set correctly, the whole teaching activities will be affected, and the development of learners will form a wrong guidance. At the present stage, in the mathematics teaching activities of kindergarten, there is a problem of singleness of teaching objectives, which hinders the development of children's ability and accomplishment to some extent. For example, teachers pay too much attention to whether children can master mathematics knowledge, but ignore the formation and development of children's basic learning qualities such as mathematics and mathematics, interest and number sense, which will form a huge resistance to children's late deep learning of mathematics.

#### 4. STRATEGIES FOR THE CONSTRUCTION OF KINDERGARTEN MATHEMATICS ACTIVITIES UNDER THE BACKGROUND OF PRESCHOOL CONNECTION

The construction of activities in the field of kindergarten mathematics is a form of mathematics teaching that conforms to the law of children's physical and mental development, especially in the aspect of cultivating children's interest in mathematics learning and mathematical literacy, which has played a very significant advantage and role. Based on the kindergarten mathematics teaching under the background of preschool connection, teachers need to start from the actual situation and cognitive rules of children when constructing activities in the field of mathematics, and try their best to help children form the quality, ability and accomplishment to adapt to primary school mathematics learning.

4.1 Build mathematical activities with the help of games Games are an important part of children's growth and life, it can be said that every child has a love of play, love to play, the construction of activities in the field of mathematics can reasonably borrow children's nature of play, so that children have a strong interest in learning mathematics, even if they enter primary school can maintain enough enthusiasm for mathematics [2]. Based on this, teachers need to find the convergence of activities in the field of mathematics and games, and take games as the carrier of mathematics teaching, so that children can understand and master the established mathematical knowledge in the process of participating in games. For example, in simple calculation teaching, teachers will need to integrate calculation problems into games to create a "play while learning" math classroom for children. When the teacher randomly names a number, the children need to form a team quickly to ensure that the number of the team is the same as the number mentioned by the teacher. Take the number "5" as an example, the children need to form a team of 5, and the teacher will issue stickers to the children who successfully form a team, and finally reward the children who get the most stickers. This game can not only exercise children's calculation ability, but also

exercise children's reaction ability, as well as stimulate children's interest in math learning.

4.2 Establish activities in the field of mathematics based on life

The construction of kindergarten mathematics activities under the background of preschool connection should not only focus on the connection of mathematical knowledge, but also attach importance to the connection of mathematical literacy and ability, so as to lay a solid foundation for children to adapt to primary school mathematics learning. Taking the connection of mathematics and number sense literacy as an example, teachers can take the elements in real life as the basis for the construction of kindergarten mathematics activities, so as to create a mathematics learning environment for children that is easy to understand, vivid and real experience. For example, in the teaching of simple addition and subtraction calculation, teachers use the way of creating life situation to transform the original abstract mathematical knowledge into intuitive and vivid dynamic knowledge. Case study: the teacher uses multimedia function to show the children what happens in life, "There are 5 candies on the table, and the children eat one", then the teacher asks "how many candies are left on the table", when the children say "there are 4 candies left", the teacher writes the formula "5-1=4" on the blackboard, and then uses the same method to demonstrate the addition formula to the children. In this process, children can understand the difference between addition and subtraction, and understand that "eat", "less", "used" can use subtraction expressions. By establishing activities in the field of mathematics based on life, it is conducive to the formation of children's basic mathematics, mathematics and number sense, which plays a strong support for children's late in-depth learning of primary school mathematics.

#### 5. CONCLUSION

To sum up, in the construction of kindergarten mathematics activities, attention should be paid to stimulating children's interest in learning mathematics, as well as the development of children's mathematical literacy such as mathematics and number sense, so as to truly play the role and significance of preschool connection work. the above thesis mainly puts forward effective strategies for constructing activities in the field of mathematics from two dimensions of gamification teaching and life-based teaching, hoping to be helpful for the development of bridging education between young and primary schools.

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### Interactive Film in the Age of New Media Art

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Abstract: Science and technology has the ability to change the world, its application in social production activities, can change the original mode of production, and can effectively improve the efficiency of social production. the era of new media art supported by science and technology has brought good development opportunities to traditional media, but also brought severe development challenges. As a popular form of artistic expression, film has undergone rapid reform and development in the era of new media art, and gradually possesses the characteristics of real-time, quick and comprehensive interaction. That is, audiences can communicate with film works, creators and other audiences without barriers, which undoubtedly creates a good marketing advantage for the development of film art. In this paper, the interactive film in the era of new media art is analyzed and explored in detail, in order to share and communicate with the majority of people in the industry.

**Keywords:** New media art era; Interactive film; Interactive form

#### **1. INTRODUCTION**

information network technology Modern has successfully narrowed the distance between people. Even if two people are not in the same country, they can realize real-time communication through also information equipment, which depends on the interactive characteristics of modern information technology. At present, all fields and industries of society are undergoing reform and innovation under the support of information technology. Among them, the concept of interactive film has been born in the film industry. As a highly interactive new media art form, it changes the limitations of traditional film production, publicity, screening and viewing, and provides the vast audience with the opportunity to participate in the whole life cycle of film art. So that the audience no longer simply to the identity of viewers to understand, appreciate and evaluate the film works. Interactive film has promoted the development of modern film industry, created a new vision and road for human art creation, and is the main symbol of the development of the new media art era, so it is of great significance and value to conduct a comprehensive study on interactive film.

#### 2. OVERVIEW OF INTERACTIVE MOVIES

The so-called interactive film refers to a concept of the entertainment media industry, which points the way for the development of the film industry and changes the production mode of film content and the communication form of film art to some extent. the basic meaning of interactive film mainly refers to that participants can successfully intervene in the environment of the film

with their roles in the film and have continuous interaction [1]. From the perspective of the essence of interactive film, it refers to the film decided by the audience, that is, the audience can participate in the production process of the film, mainly including script compilation, subject selection, director and actor selection, etc. This participation process is mostly based on network information technology, among which the interactive form of online voting is more common, and the film producer opens a special online voting platform. Collecting film production information from the vast audience, and selecting reasonable information into the film, it can be said that interactive film subverts the traditional way of film production, effectively improves the interactive and adaptability of film art, and creates favorable conditions for the development of modern film industry.

### **3. INTERACTIVE FORMS OF INTERACTIVE FILMS**

Interactive films in the era of new media art can be divided into the following three forms of interaction: first, the interaction between the audience and the works; Second, the interaction between the audience and the creator; Third, the interaction between the audience and other audiences. Each form of film interaction has its own uniqueness and can create a different experience for the audience.

3.1 The interaction between the audience and the works Traditional film is a form of single-direction communication, and the audience can only enjoy the film works without forming any influence on the works. This kind of film art form can hardly satisfy the curiosity of the audience, let alone form emotional and ideological resonance with the audience [2]. On the other hand, interactive films can build a bridge of communication between audiences and works and realize communication and information transfer between audiences and works. First of all, the interaction between the audience and the works can enhance the information exchange between the audience and the works. For example, before the film is released, the producer can use new media technology to convey part of the film production information, actors and story background to the general audience. the audience can put forward their own opinions through the platform, and the producer can find the direction of film production improvement in the opinions, and make reasonable changes to the film shooting. Secondly, the audience can feel the works more directly and deeply. Take the development of the film plot as an example, the audience can choose the development direction of the story plot through specific channels, which can give the audience the feeling of participating in the film plot and provide them with an immersive movie-watching experience.

3.2 The interaction between audiences and creators

The interaction between audiences and film creators can guarantee the diversified and adaptive development of film creation, and is conducive to gaining the support of the majority of audiences. Currently, there are various forms of interaction between audiences and creators, but the specific interaction mostly occurs in the production and creation stage of film works. For example, in the creation stage of film works, the creators set up interactive platforms on the Internet. Wechat, Weibo, etc., have high traffic, which is suitable for acting as a bridge between creators and audiences. Audiences express their unique understandings and opinions on the film story location, background, plot, theme song style and other elements provided by the creator. the creator carefully checks every opinion and further communicates with the audience until the production direction of the film works is finalized. the interaction between the audience and the creator can make the film works more in line with the needs of the audience, which can also provide the audience with a good viewing experience.

3.3 Interaction between audiences

As early as the moment of the birth of a film, the interaction between the audience appeared, which is mainly the objective and subjective communication and evaluation of the film after the audience finished watching the film. This kind of interaction has certain restrictions and requires the audience to have watched the film. Interactive films in the era of new media art have changed the form of film transmission and created a platform for real-time interaction during movie watching, that is, audiences express their ideas through the communication window, and other audiences react according to the actual situation. This kind of interaction improves audiences' movie-watching experience.

### 4. THE DEVELOPMENT OF INTERACTIVE FILM ANALYSIS

4.1 The development significance of interactive films Under the background of the development of information society, there are no more than two needs for the use of network information technology, one is to provide content and disseminate content, the other is to use media and receive content. the interactive film in the new media era, supported by network information technology, can be said to be a boat in the vast ocean that has found its way forward, effectively promoted the development of the presentation form of film art, and provided strong support for the film art to meet the needs of the audience and social development. For example, in the production stage, interactive films interact with the vast audience, which can meet the needs of the audience to fill and adjust the film plot, and can also follow the will of the vast audience to select actors, which undoubtedly expands the direction of film production.

4.2 The development value of interactive films

All the work of film production, shooting, publicity and screening is based on providing good viewing experience to the audience. Of course, there is no lack of marketing strategies and interest relations, but as a high-quality film, it should be promoted to the artistic level. As a new form of film, interactive film is of great value to the development of film, which is mainly reflected in the following aspects: Interactive film has stronger radiation efficiency, better communication ability than traditional film, and also has stronger integration attribute, which can promote the development of film industry to a certain extent.

#### 5. CONCLUSION

To sum up, interactive films in the era of new media art not only change the audience's form and feeling of watching movies, but also innovate the way of film transmission, which creates favorable conditions for the development of film art in the new era. the above systematically analyzes and studies the basic overview of interactive films, their interactive forms and their development advantages from three dimensions, hoping to accelerate the arrival of the era of interactive films comprehensively.

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### Research On Student Management of College Students in the New Media Era

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Abstract: With the continuous development and popularity of information technology, new media has gradually become an important channel for people to get information, communicate and spread. In the management of college students, new media has gradually become an important means and tool. However, the student management of college students in the new media era also faces a series of new challenges and problems, such as the diversification of information dissemination channels and the prominence of students' mental health problems. Therefore, it is of great practical and theoretical significance to study and explore the student management work of college students in the new media era.

**Keywords:** New media; College students; Management; Research.

#### 1. ANALYSIS OF THE CURRENT SITUATION OF COLLEGE STUDENTS' MANAGEMENT IN THE NEW MEDIA ERA

1.1 Under the background of new media era, the management of college students in colleges and universities has the following characteristics:

1.1.1 Diversification of information dissemination channels. With the popularization of Internet and mobile Internet, the channels for students to get information are more diversified, such as WeChat public number, Sina Weibo, Qzone, Jitterbug and other social platforms and short video platforms, which also provide more communication channels and ways for college students' management.

1.1.2. Students' mentality and mental health problems are prominent. the popularity and use of new media also bring a series of mental health problems, such as network addiction, anxiety and depression. These problems not only affect the study and life of students, but also put forward higher requirements for the management of college students.

1.1.3. the influence of social network is expanding. With the popularity of social networks, the communication and interaction among students have changed. In this networked environment, college students' management needs to pay more attention to the management and guidance of social networks to promote students' healthy growth.

1.1.4. Application and innovation of information technology. In the new media era, college students' management needs to pay more attention to the application and innovation of information technology, such as student behavior analysis based on big data and

intelligent student management system, in order to improve the management efficiency and quality.

Therefore, the management of college students in the new media era needs to pay more attention to informatization, networking and intelligence to meet the development of the times and the needs of students.

1.2 Problems of college students' management in the new media era

1.2.1. the loss of control of information dissemination. With the popularity of new media, the speed and scope of information dissemination become more extensive, and the authenticity and credibility of information are difficult to guarantee. Students may be influenced by false information, bad information and so on, which adversely affects student management.

1.2.2. Students' mental health problems are prominent. the use and popularity of new media has also brought a series of mental health problems, such as Internet addiction, anxiety, depression, etc. Schools need to pay more attention to the prevention, control and solution of students' mental health problems.

1.2.3. the influence of social networks continues to expand. the popularity of social networks has also brought about a series of social problems, such as online violence, privacy leakage, etc. Schools need to pay more attention to the management and guidance of social networks in order to promote the healthy growth of students.

1.2.4. the degree of informationization of management work is not high. Although the application and innovation of new media technology are gradually applied in the management of college students, the degree of informationization is still not high, and the efficiency and quality of management needs to be improved.

1.2.5. the degree of personalization of management is not enough. In the era of new media, students' needs and expectations are changing constantly, and schools need to pay more attention to personalized management in order to better meet students' needs and expectations.

Therefore, in order to better cope with these problems, colleges and universities need to strengthen the informationization, personalization and innovation of management in the new media era, so as to improve the efficiency and quality of management, as well as to better protect the safety and health of students.

#### 2. RESEARCH ON THE STRATEGY OF COLLEGE STUDENTS' MANAGEMENT IN THE NEW MEDIA ERA

2.1 The basic principles of college students' management in the new media era include the following points:

2.1.1. Information security principle. Colleges and universities need to strengthen the protection of students' information, safeguard students' privacy and rights, and at the same time prevent the spread and influence of bad information.

2.1.2. Principle of personalized management. Colleges and universities need to develop personalized management programs for different students' characteristics and needs, so as to better meet students' needs and expectations.

2.1.3. Principle of technological innovation. Colleges and universities need to continuously introduce new technological means and tools to improve the efficiency and quality of management.

2.1.4. Principle of openness and cooperation. Colleges and universities need to cooperate closely with all walks of life to promote the development and progress of college student management with the help of resources and strengths from all sides.

2.1.5. Principle of student subjectivity. Colleges and universities need to fully respect the main position of students, give full play to students' autonomy and creativity, let students participate in management, and promote students' all-round development.

2.1.6. Principle of comprehensive governance. Colleges and universities need to implement comprehensive governance, combine student management with other related work, and jointly promote the overall development of college students.

To sum up, the basic principles of college students' management in the new media era are information security, personalized management, scientific and technological innovation, open cooperation, student subjectivity and comprehensive governance as the core, so as to better meet students' needs and expectations and promote students' all-round development.

#### 3. INNOVATIVE IDEAS OF COLLEGE STUDENTS' MANAGEMENT IN THE NEW MEDIA ERA

In the era of new media, college students management needs to constantly innovate ideas to better adapt to the development of the times and meet the needs of students. the following are some innovative ideas:

3.1. Use big data to analyze students' behavior. Colleges and universities can collect students' behavioral data through student information management system and analyze them by using big data analysis technology to understand students' behavioral patterns and needs, so as to provide reference basis for student management decisions.

3.2. Build intelligent student management system. Universities can combine information technology and artificial intelligence to build intelligent student management systems, realize automation and intelligence of student information management, and improve management efficiency and quality.

3.3. Develop online student activities. Universities can carry out various student activities through online platforms, such as online job fairs, online volunteer activities, online lectures, etc., to expand the participation and influence of student activities.

3.4. Strengthen students' mental health education. Colleges and universities can carry out mental health education activities to strengthen the prevention and treatment of students' mental health problems and improve their mental health.

3.5. Guide students to use new media correctly. Colleges and universities can guide students to use new media correctly, cultivate healthy online behavior habits of students, and prevent students from being influenced by bad information and influence.

3.6. Strengthen school-enterprise cooperation. Colleges and universities can cooperate with enterprises to jointly carry out student internship and employment activities, so as to provide students with more employment opportunities and practice opportunities.

3.7. Implement personalized education. Colleges and universities can carry out personalized education according to students' characteristics and needs, so as to help students better develop their own advantages and realize their personal values.

To sum up, under the new media era, college student management needs to constantly innovate ideas and use new technical means such as information technology and artificial intelligence to carry out intelligent, personalized and online student management work in order to better meet students' needs and expectations and promote their all-round development.

This study provides some useful ideas and references for college student management in the era of new media, which helps colleges and universities to better carry out student management, improve students' comprehensive quality and ability, and create better conditions and environment for students' growth and development.

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### The Strategy for Dealing with Unbalanced Quotations in the Field of Tendering and Bidding Based on Management Science Control

#### Qizhenshi Wang

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**Abstract:** Using the scientific management methods to reasonably determine and effectively control costs, in order to improve the economic benefits of construction projects. Starting from the perspective of the entire process control and management of the cost, this paper mainly analyzes Strategies for Dealing with Unbalanced Quotations in the Field of Tendering and Bidding Based on Management Science Control.

Keywords: Bid; Unbalanced quotation; Strategy

#### **1. INTRODUCTION**

The Unbalanced quotation conceals the actual investment cost of the bidding project, indirectly promoting the "low bid winning and high claim settlement", which is one of the main reasons for the "three overruns" of project costs. It increases the risk of project construction and is not conducive to the selection of the most powerful contractor by the tenderer, which can easily lead to investment loss and have a negative impact on the development of fair competition mechanisms in the construction market, and is not conducive to the standardized development of the industry. the Unbalanced quotation conceals the actual investment cost of the project. It increases the risk of project construction and is not conducive to the selection of the most powerful contractor by the tenderer, which can easily lead to investment loss and have a negative impact on the development of fair competition mechanisms in the construction market.

#### 2. THE STATE SHOULD STRENGTHEN MACROECONOMIC REGULATION IN THE FIELD OF BID

2.1 The state should strengthen macroeconomic regulation in the field of bidding, strengthen the statistics and publication of industry performance in the bidding field, and establish effective constraint mechanisms throughout society. For example, the construction department can implement a system of engineering audit disclosure, strengthen the statistics of engineering performance, establish authoritative performance records in the construction field, and legally publish the bid winning price (BP) and settlement price (SP), or the ratio of the two (BP/SP) through online platforms, so that construction units and bidding agencies can easily understand the historical situation and set corresponding countermeasures.

2.2 The state has not formed a model of relying on professional bidding agencies, and after the cancellation of qualification management for bidding agencies. the state should establish professional qualifications for bidding agency, and the government conducts legislative supervision on the bidding business process. There is a lack of management requirements for the technical level and professional ability of technical personnel in the professional field, resulting in low levels of industry professionals and difficulty in mastering complex technical tasks, seriously affecting the quality of project implementation and project effectiveness. the state should establish vocational and technical professional qualifications to guide the healthy development of the field through the improvement of the quality of practitioners.

2.3 The state should improve the scientific guidance standards in the industry field, establish Big Data platforms and AI analysis, establish dynamic bidding and procurement evaluation factors, standards, and result proportion guidance and supervision based on project characteristics and implementation performance target results, and conduct real-time B. D. monitoring of the bid evaluation process, set evaluation standard red lines, intervene in the bid evaluation process, and eliminate human error interference. And, we will improve national regulations and make the supervision and management mechanism more technically legal and standardized.

2.4 The state should establish a scientific bidding procedure, which can be designed through legislation and technical standard setting to evaluate the new bidding and evaluation procedures in a step-by-step manner. This can reduce the problem of large deviation in mathematical expectations of linear evaluation results and inability to approach the optimal solution, and obtain the optimal solution of the evaluation results.

#### 3. COUNTERMEASURES FOR PURCHASERS TO RESPOND TO UNBALANCED QUOTATIONS

3.1 Countermeasure settings for bidding documents

The bidding documents, as the guiding documents for the entire bidding process and even the entire project implementation process, are the key to the entire project management and one of the core contents of controlling unbalanced quotations. the tenderer can standardize the

comprehensive unit price composition of the bidding target list (including pricing content and cost composition), and clearly deduct points from economic bidding documents that use unbalanced quotation. the tenderer can set a deduction ratio that exceeds the average quotation. To prevent or reduce the impact of parts that may cause significant changes in the settlement price during settlement on the economic bidding quotation. By analyzing the variable settlement price factors and formulating measurement and payment regulations in the bidding documents, the impact of unbalanced pricing can be constrained.

Through Big data and AI pricing technology, the technology of bidding control prices is reasonable, complete, and accurate, minimizing uncontrollable cost interference. There are indeed gaps that can be supplemented through re bidding and procurement. 3.2 Process analysis bidding quotation

When reviewing bidders' quotations, a comprehensive and detailed analysis of the project's list and price proportion composition (including pricing content and cost composition) should be conducted to overcome the practice of only looking at the total price and not at the unit price. In fact, if the total price meets the requirements, it does not mean that the detailed unit price is reasonable. At the same time, it is necessary to balance the price and quantity, fully utilize the collected data, compare and analyze them, distinguish between the parts with high and low quotations, and ultimately determine a reasonable quotation or benchmark price. Another challenge is to overcome the bias in evaluation caused by focusing solely on price and quantity, without considering project characteristics, technical solutions, performance goals, and procurement content.

3.3 Scientific and standardized evaluation process

During the evaluation process, attention should be paid to preventing bidders from gradually upgrading their prices or implicitly bidding high prices. For example, taking some difficult problems and new processes in the project as reserves, certain special work contents with high quotations are excluded from the quotation, and opportunities for further negotiation are obtained at a relatively low price. Then, during the negotiation, the price is gradually raised, resulting in the actual high bid price. To avoid these situations, the number of experts

familiar with the procurement business field in the evaluation expert group can be appropriately increased, and objective and fair bid clearance work can be carried out. Then promote the scope of use of the intelligent system for clearing bids, and through the use of AI, better detect and discover problems in bidding documents, making up for the lack of experience of bid evaluation personnel.

3.4 Choose an appropriate evaluation method

The control of unbalanced pricing in the evaluation method cannot be ignored. At present, there is no unified and fixed evaluation method established domestically and internationally. Bidders can choose an appropriate evaluation method based on the actual situation of the construction project. At present, the main methods for determining the base price in China include the single base price bidding method, the composite base price bidding method, and the non base price bidding method. With the development of the market economy, the single base bidding method and the composite base bidding method will gradually disappear, and the ultimate development direction is the non base bidding method. 4. CONCLUSION

Controlling imbalanced pricing has positive implications for "winning a bid at a reasonable low price" and is conducive to stimulating the development of advanced productivity. In order to survive and develop in the fierce market competition, suppliers can only reduce operating costs by adopting advanced technology, equipment, processes, and modern management methods. the industry standard of survival of the fittest also requires the control of unbalanced pricing to create a fairer environment for market competition.

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### The Education Value of College Students' Volunteer Service in the New Era

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Abstract: Voluntary service is the symbol of modern social civilization and progress, but also the embodiment of the traditional virtues of the Chinese nation. As the main front of talent training, colleges and universities should actively play an important role in the construction of voluntary service system, adhere to the socialist core values as the guidance, the cultivation and practice of socialist core values into the whole process of voluntary service, so that voluntary service becomes an important way for college students to grow and become talented.

**Keywords:** New era; Colleges and universities; Volunteer service; Education value

#### **1. INTRODUCTION**

Under the new era, colleges and universities should persist in integrating socialist core values into the whole process of voluntary service, actively explore the effective mode and long-term mechanism of college students' voluntary service under the new situation, and take cultivating and practicing socialist core values as the soul and main line of voluntary service work. Guide college students to actively participate in social governance, civilized practice, targeted poverty alleviation, environmental protection, community construction and other voluntary service activities.

### 2. STRENGTHEN ORGANIZATIONAL LEADERSHIP AND PROVIDE GUARANTEES

Voluntary service is an important carrier of college students' practice and education. In order to normalize and institutionalize voluntary service, a sound organization and management mechanism must be established. First, establish a sound organization and management mechanism. Strengthen the organizational construction at the three levels of school, department and class, improve the leading organs and working organs, clarify the job responsibilities and tasks, integrate volunteer service into the overall plan of school teaching reform, and provide guarantee in the aspects of curriculum teaching, scientific research practice and the second classroom. Second, establish sound rules and regulations. Formulate perfect rules and regulations and incentive mechanism to ensure the normal and orderly development of voluntary service activities. Third, we should strengthen the training of college students. Strengthen the backbone strength of college students, establish volunteer associations, cultivate the core strength of college students, let college students play an exemplary role in volunteer work, with their own practical actions to guide and drive young people to participate in volunteer work.

#### 3. STRENGTHEN CURRICULUM CONSTRUCTION, CONSOLIDATE THE FOUNDATION

Voluntary service course is an important carrier for universities to carry out voluntary service education for college students, and whether the curriculum is reasonable or not directly affects the effect of voluntary service [1]. Therefore, in the design of voluntary service curriculum system, we should adhere to the peopleoriented, education-oriented, closely combined with the characteristics of college students, set reasonable teaching objectives and teaching content. We should make full use of social resources, strengthen the cooperation between colleges and universities and local governments, enterprises and public institutions and other organizations and groups, and integrate highquality resources through summer social practices and other activities. At the same time, through social survey, voluntary service and other practical forms, so that college students better understand the society, cultivate the sense of responsibility and mission to the society. In the construction of voluntary service curriculum system, the education of voluntary spirit and socialist core values should be highlighted, and the enthusiasm and yearning for society and life should be aroused by guiding college students to participate in voluntary service activities.

#### 4. STRENGTHEN THE CONSTRUCTION OF CAMPUS CULTURE, ENRICH THE CONNOTATION

The most basic goal of college students' voluntary activities is to guide and train the young generation, so that they can actively implement the socialist core values in practice, and become a socialist construction team with Chinese characteristics and a reliable successor. Colleges and universities should further improve the campus culture, enrich the cultural content of colleges and universities, so that university volunteer activities better integrate into social life.

We should pay attention to the linkage between college students' volunteer service and student associations, further strengthen the leading role of college students' volunteer service in the construction of school organizational culture, and actively carry out a series of student association activities. We should pay attention to the linkage between college students' volunteer service and the construction of campus culture. When organizing various campus cultural activities, we should give full play to the active role of college students' volunteers, guide college students to actively participate in various colorful cultural activities, make college life become a big stage for the integration of college students' volunteer service and campus culture, and promote the two-way interaction between campus culture and social culture.

#### 5. STRENGTHEN INSTITUTIONAL CONSTRUCTION, IMPROVE THE MECHANISM

Colleges and universities should establish a perfect voluntary service system and perfect the working mechanism of voluntary service. Management system is the regulation of the organization, implementation, supervision and incentive of college students' participation in voluntary service activities, and also the management of college students' participation in voluntary service activities, which determines the whole process of college students' participation in voluntary service activities. Secondly, we should establish a perfect incentive system. Establish an incentive mechanism for volunteers, and commend outstanding volunteers and advanced examples who participate in volunteer service in time, so that they can become role models for college students' study and life, and guide college students to make contributions to others and society in study and life. We should improve the social security system, establish a fund raising and use mechanism for voluntary services, and give material or spiritual rewards to volunteers who participate in voluntary services. Colleges and universities should actively strive for the support of schools, make full use of campus resources, improve the internal security mechanism; At the same time, we should win the support of the government, integrate social resources, and jointly promote the construction of college students' voluntary service system.

### 6. STRENGTHEN THE CONSTRUCTION OF PRACTICE BASE, EXPAND THE FIELD

College students' voluntary service should establish a sound long-term mechanism to give full play to the important role of colleges and universities in talent training. It is necessary to give full play to the important role of the practice base, build a service platform combining "on campus and off campus", and carry out cooperation with communities, enterprises, government and other units to improve the practical ability of college students in practice. Make full use of social resources, expand the service field, and create a number of distinctive characteristics and outstanding advantages of voluntary service brands. Social practice should be organically combined with voluntary service, and the service field should be continuously expanded. Organize volunteers to carry out public welfare activities such as science, technology and culture, environmental protection, medical and health care, poverty alleviation, etc. Relying on the social practice base to carry out the "three rural" as the main content of college students social practice activities. We will organize students to do voluntary labor in rural communities, communities, enterprises and social welfare institutions in a planned way to provide services for the people. Colleges and universities should take this

opportunity and rely on "people-oriented" social practice activities to explore new social service mode in practice, so as to promote the healthy development of social practice activities.

### 7. STRENGTHEN TEAM BUILDING AND OPTIMIZE STRUCTURE

Volunteer service team is the core and main body of volunteer team. First, in strict accordance with the requirements of the Management Measures for College Students' Voluntary Services, a perfect voluntary service management system should be established among students, student associations or league organizations should be established, the recruitment, registration, training, assessment and incentive mechanisms of college students' volunteer teams should be improved, and the management of college students' volunteers should be standardized [2]. Second, we should strengthen the overall management of college students' voluntary services. Actively strive for the support of league organizations at all levels, incorporate youth volunteer service activities into the overall work plan of the school, and improve the design, organization, coordination and implementation mechanism of volunteer service projects. Third, we should optimize the structure of college students' volunteer service team. According to the characteristics of each major and discipline, key students are selected to form young volunteer teams to carry out targeted volunteer service activities. At the same time, students of all colleges are actively encouraged to participate in the youth volunteer service team, forming a three-level linkage mechanism among school, college and class. In addition, strengthen the training and exercise of the backbone of the youth volunteer service team, and establish a college student volunteer service team with appropriate scale, reasonable structure and excellent quality.

#### 8. CONCLUSION

With socialism with Chinese characteristics entering a new era, the status and role of volunteer service in the ideological and political education of college students is more prominent, colleges and universities should base on the requirements of the Times, combined with the goal of talent training, the study and practice of volunteer service education of college students. At the same time, we should also actively promote the institutionalization, standardization and professional development of voluntary services. Through the effective development of voluntary services, we can help college students understand the national conditions, cultivate and practice the socialist core values, and improve their ideological and moral quality.

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### Reform And Practice of Ideological and Political Education in the Course Of "Introduction to Animation"

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Abstract: The course "Introduction to Animation" is a professional foundation course for the animation production technology major in vocational colleges. It mainly cultivates students' aesthetic appreciation ability and professional literacy in animation, and lays a foundation for future learning in animation creation. As future professionals in the animation industry, vocational students need more professional skills and literacy, so integrating ideological and political education into curriculum teaching is particularly important. This article combines the actual teaching of the course, starting from deeply exploring the ideological and political elements of the course, focusing on the integration of ideological and political design in the course content of "Introduction to Animation" for example analysis, and exploring a new path for ideological and political reform of the course. Keywords: Vocational education; Introduction to Animation; Curriculum Ideology and Politics

#### **1. INTRODUCTION**

In recent years, major universities in China have actively carried out teaching reforms around the "curriculum ideological and political education", adhering to the fundamental task of cultivating morality and cultivating people, and integrating ideological and political work throughout the entire process of education and teaching, achieving full and all-round education, thus cultivating students into socialist builders and successors with comprehensive development of morality, intelligence, physical fitness, and aesthetics. This article combines the teaching practice of Zibo Vocational College courses and focuses on exploring the basic elements of ideological and political education in the curriculum. It focuses on analyzing examples of how to integrate ideological and political design into the course content of "Introduction to Animation", and explores a new path for ideological and political education reform in the curriculum.

#### 2. THE CURRENT TEACHING SITUATION OF THE COURSE "INTRODUCTION TO ANIMATION"

For a long time, the teaching of the course "Introduction to Animation" has been purely theoretical knowledge impartation. After the implementation of ideological and political reform, there is a phenomenon of mechanically applying ideological and political elements into the teaching content, which has not been well integrated into classroom teaching, resulting in the phenomenon of "two skins" between ideological and political education and professional teaching. Moreover, the exploration of ideological and political elements is not deep enough, such as breaking away from the background of professional disciplines and majors, the current development status and trends of industries, and the teaching content. the teaching design is not reasonable enough, and the effectiveness of teaching and educating people is not well achieved. Moreover, the characteristics of vocational college students are active thinking, broad interests, strong curiosity, weak ideological and political concepts, low self-discipline ability, lack of correct self judgment and choice ability under the impact of online information, and insufficient understanding of professional ethics and craftsmanship spirit.

#### **3.** THE SIGNIFICANCE OF IMPLEMENTING THE IDEOLOGICAL AND POLITICAL EDUCATION COURSE "INTRODUCTION TO ANIMATION"

At present, the animation industry has entered a period of rapid development, and graduates majoring in animation are the creators of future animation works. the values contained in their animation culture play a crucial role in influencing society. Integrating the ideological and political elements of the curriculum into the cultivation of animation professionals, on the one hand, broaden the students' mind and vision, fully understand the charm of the excellent traditional culture and art of the Chinese nation, enhance the sense of Chinese cultural identity, and enhance cultural self-confidence. which is conducive to carrying forward and inheriting the traditional culture of the Chinese nation. On the other hand, through the invisible educational function of ideological and political education, it is beneficial to improve students' professional knowledge and skill levels, enhance artistic literacy and moral cultivation, and create excellent anime works that conform to socialist core values, actively promoting social progress. Therefore, it is particularly important to cultivate animation talents with political qualities, humanistic qualities, and moral sentiments.

#### 4. THE IMPLEMENTATION OF IDEOLOGICAL AND POLITICAL EDUCATION IN THE COURSE OF "INTRODUCTION TO ANIMATION"

4.1 Curriculum standards and teaching experience for ideological and political integration

In the process of curriculum ideological and political education reform, it is necessary to achieve a

comprehensive and comprehensive integration of ideological and political education and curriculum teaching. In the curriculum standards, the idea of ideological and political design for the course "Introduction to Animation" is proposed: to effectively integrate ideological and political education work into the entire teaching process of "Introduction to Animation", and to integrate patriotism, craftsmanship spirit, innovation spirit, labor model spirit, contract spirit, etc. into the curriculum standards, teaching plans, curriculum content, teaching evaluation, and to build professional courses full of moral education elements and play moral education functions.

4.2 Teaching content of ideological and political integration in the course

Based on the characteristics of the course "Introduction to Animation" and with the goal of cultivating students' noble cultural literacy, healthy aesthetic taste, and optimistic attitude towards life, combined with the development history of animation, patriotism, national aspirations, and serving the country are integrated into the teaching. the teaching content is divided into seven learning contexts, Each learning context corresponds to seven major ideological and political themes: "Craftsmanship Spirit, Integrity Principles, Normative Consciousness, Patriotism, Teamwork Spirit, Social Responsibility, and Cultural Confidence. " Each theme has a theme that integrates scientific knowledge and values.

For example, the animation development module explains the history of Chinese animation development, showcases and compares the ink and wash animation work "Little Tadpole Looking for Mom" released in 1961 and the ink and wash animation film "Autumn Harvest" released in 2020. the first ink and wash animated film in China was created by predecessors who, after several months of hard work, overcame difficulties and completely changed the mode of simply imitating American and Soviet animation creation. They incorporated the concept of traditional Chinese aesthetics into animation creation, sparking a wave of further exploration of national style in China and establishing the international status of the "Chinese School". Sixty years have passed since the release of "Little Tadpole Seeks Mom", but it still feels vivid to appreciate it again, Let the world understand traditional Chinese art in a new way. the work 'Autumn Harvest' inherits the excellent tradition of traditional Chinese ink and wash animation, combines modern technology with ink and wash techniques, innovates in artistic form and aesthetic taste, showcases the unique artistic charm of Chinese animation, and becomes a representative of the 'New School of Chinese Animation'. Through appreciation, students have gained a deeper understanding of the creative background and development process of Chinese ink and wash animation, as well as the artistic heights they have reached, enhancing their cultural confidence. At the same time, they have expressed sincere respect and admiration for the older generation of animation masters

and current animation creators in China, and expressed their willingness to learn from their craftsmanship and innovation spirit, inspiring their determination to strive for the rise of Chinese animation.

4.3 Implement ideological and political reform relying on various teaching methods

One is to use the teaching method of lecturing. Teachers should first improve their ideological level, political awareness, and moral qualities, fully play a leading role in classroom teaching, showcase their knowledge, cultivation, and emotions in front of students, and subtly integrate ideological and political education into teaching, achieving moral education and moral education.

The second is to use Case method method and heuristic teaching method. Carefully select inspiring videos as case studies to introduce into the classroom, encouraging students to think independently and guiding them to transform knowledge into abilities. For example, the animation creation theory module explains the animation technology part, explains the high-level Chinese animation film Jiang Ziya in simple terms as a case, analyzes the application of animation technology, and at the same time, educates students to establish cultural self-confidence, cultivate students' patriotism and sense of responsibility, enhance their sense of cultural identity and national self-confidence, and guide students to think about how to inherit China's excellent traditional cultural heritage, Continuously creating new brilliance in Chinese culture.

The third is to use other teaching methods such as discussion based teaching, scenario simulation, and role experience. In classroom teaching, students are the main body, and teachers guide students to analyze, think, and discuss, so that ideological and political elements can be quietly integrated into the teaching. For example, the Animation Works Theory module allows students to discuss the animation script, animation scenes, animation music, and animation characters of the animated film "Nezha", advocating for honesty and trustworthiness, learning tolerance, unity and cooperation, and cultivating students' professional ethics of honesty and trustworthiness, as well as the spirit of craftsmanship that strives for excellence.

4.4 Reflection on Teaching Reform

At present, the ideological and political reform of the "Introduction to Animation" course still needs to be improved. the ideological and political teachers of the course should actively update their educational concepts, enhance their own cultivation, constantly explore, try, summarize, and improve in the implementation of ideological and political teaching in the course, and strive to cultivate excellent animation talents who not only have professional comprehensive literacy, but also "have a sense of patriotism, international perspective, and responsibility" for the country.

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### Artistic Virtue Is Great When You Take In All the Rivers--The New Era Of University Music Teachers' Moral And Ethical Construction

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Abstract: Strengthening the construction of music teachers' moral and teacher's style in colleges and universities is not only the need to improve the quality of music education and teaching in colleges and universities, but also the necessary condition for the healthy growth and development of music teachers. the article analyzes the connotation of teacher morality and teacher style in the new era, and proposes the path of building music teachers' morality and teacher style in colleges and universities, that is, to establish the value pursuit of "morality and art", adhere to "four unities" and establish "six mechanisms". "Six mechanisms".

**Keywords:** Music teachers; Teacher morality and teacher style; Virtue and art; Construction path; New era

#### **1. INTRODUCTION**

The report of the 19th Party Congress emphasizes that it is necessary to "strengthen the construction of teacher morality and teacher style and cultivate a high-quality teacher team", which is also an important guarantee to run a good education work to the satisfaction of the people in the context of the new era. This important statement not only illustrates the importance of building teacher morality and style, but also puts forward new requirements for every people's teacher in the new era. In this context, how to cognize and strengthen the construction of teacher moral and teacher style of college music teachers, so that college music teachers can become the embodiment of knowledge, the source of wisdom, the model of morality and personality, and play a greater role in improving the quality of music education and teaching and promoting the all-round development of students, is both an important theoretical and practical proposition facing the school, and a life topic that every music teacher must seriously think and practice.

### 2. THE CONTEMPORARY CONNOTATION OF TEACHER MORALITY AND STYLE

What is teacher morality and style? Confucius said "his body is correct, not to order and practice; his body is not correct, although the order does not work", emphasizing the teacher as a model, the first example; Han Yu said Han Yu called it "preaching, teaching, and solving problems", emphasizing that teacher morality is embedded in practice. the famous educator Tao Xingzhi called "love all over the world", "self-transformation", "teaching others by others", "leading by example", etc.; Ye Shengtao called "love all over the world", "selftransformation", "teaching others by others", "leading by example", etc. the famous educator Tao Xingzhi said "love fills the world, " "teach people by themselves, " "teach people by example, " etc.; Ye Shengtao said "to be a teacher" and "teacher's morality is the foundation. In the practice of education and teaching, contemporary teachers have different perceptions and knowledge of the connotation of teacher ethics and teacher style: some believe that the root of teacher ethics and teacher style is the correct concept, the core is the sense of responsibility, and the soul is self-discipline in words and deeds; some believe that its connotation mainly includes love, responsibility and educational ability; some believe that the foundation of teacher ethics and teacher style is the sense of responsibility, the premise is the sense of professionalism, and the condition is the career; some believe that the connotation of teacher ethics and teacher style is "to have a sense of responsibility for oneself". Some think that the connotation of teacher ethics is "having an ordinary heart for oneself, a sincere heart for one's work, and a responsible heart for students. " [1]

We often think that professional ethics refers to the professional moral quality of college teachers, i. e. educational knowledge, humanistic quality and moral cultivation. And teacher style refers to the moral ethos of teachers. Teacher morality and teacher style are dialectically unified; teacher morality is the kernel of teacher style, and teacher style is the coat of teacher morality; excellent teacher morality can form a more excellent teacher style; on the contrary, poor teacher style will also affect the cultivation and formation of good teacher morality with restrictions. In the background of the new era, the goal of building a strong education country and "running a good education to the satisfaction of the people" has given a new connotation to the teacher morality in colleges and universities, which not only requires teachers to have good professional conduct, perfect personality charm, noble character, profound professional knowledge, but also requires teachers to be energetic and aggressive, with advanced education the concept, the correct value orientation, the times of acumen, persistent innovation, etc..

These, in turn, are the general contents of music teachers' moral and ethical qualities. "The music teacher is a person of virtue, and he or she should be able to move the light of virtue, to move the harmony of the four gases, and to write the reason of all things. Only with the content of "virtue" can we say "music". Music has been regarded as the light of virtue since ancient times, and has a unique role in cultivating the character of people and shaping the character of the nation. As a music teacher who transmits the way of music, teaches the profession of music, and solves the problems of music, he or she should not only have good professional conduct, perfect charisma, noble character, words and deeds, rich professional knowledge, and daring spirit of exploration, but also learn and pass on the excellent music art of ancient and modern China and abroad with the courage of taking in all the rivers, improve his or her artistic attainment and teaching ability, and make it fuse with the music of "virtue" as an organic whole. the music of "Dezhong Hua" will be integrated into an organic whole.

#### 3. THE CONSTRUCTION OF MUSIC TEACHERS TEACHER ETHICS TEACHER STYLE OF THE TIMES VALUE LOGIC

China's reform and development has entered a new era, and a new strategic goal has been put forward for education reform and development: "building a strong education country and providing education to the satisfaction of the people". Based on this new strategic goal, the report of the 19th Party Congress put forward the requirement of "strengthening the construction of teacher morality and style and cultivating a high-quality teaching team". "The "hundred-year plan, educationbased; education plan, teacher-based; teacher plan, teacher ethics-based. In this way, we can deeply perceive the value logic of cultivating music teachers' moral and teacher style in the context of the new era: cultivating music teachers' moral and teacher style is not only the need to realize the "Chinese dream", the need to build a strong cultural country and run a good education to the satisfaction of the people, but also the cornerstone to promote the healthy growth and development of music teachers, [2] and to better It is also the cornerstone of promoting the healthy growth and development of music teachers, [2] and the fundamental guarantee of "passing on the way of music, teaching the profession of music, and solving the confusion of music".

From the perspective of college music teachers themselves, "talent is the capital of virtue; virtue is the handsome of talent". Virtue" and "art" are dialectical unity, "virtue" is the soul and direction of "art", "art" is the soul and direction of "art". "Art" is the foundation and support of "virtue". Xian Xinghai insisted on "music for the people" and persistently pursued "the union of Tao and art", "the fusion of emotion and reason", "the double harmony of virtue and art It is precisely because of his persistence in pursuing "the union of morality and art, " "the fusion of emotion and reason, " and "the unity of virtue and art, " that he created the world-famous "Yellow River Cantata". Zhou Xiaoyan, a professor of vocal singing at the Shanghai Conservatory of Music, has been awarded the Golden Bell Award, the highest honor in the Chinese music industry, and has trained a large number of artists who are also "virtuous", such as Liao Changyong and Wei Song. For this reason, music

teachers should take "virtue and art" as a lifelong pursuit, take "virtue" as the foundation of their own lives and teaching, and promote the joint improvement of human and artistic qualities.

From the perspective of talent cultivation, establishing moral education and promoting the all-round development of students' moral, intellectual, physical and aesthetic qualities is the fundamental task of school education and teaching in the new era in China. Music teachers and the music education and teaching they engage in have an extremely important position in realizing this fundamental task. the musician Beethoven believed that "music is a higher revelation than all wisdom and all philosophy", which is also determined by the qualities of music. As an art that people care about the subjective and objective world, music can cause people's hearts to resonate, touch their souls, and make them feel beauty, appreciate beauty, know beauty, distinguish beauty, and create beauty. Music itself has a strict logic, but also contains many vivid and "inexpressible" contents, which can promote people's mental development and virtue cultivation, and bring them beauty awareness, education and enjoyment. Studies have found that learning music stimulates the development of the brain, enhances memory and cultivates a rich imagination, and the extent to which these functions play out depends on the process of music teacher education. Only by integrating good teacher ethics and style with moving melodies, profound moods and sincere emotions, and by cultivating students' correct aesthetic ability, cultivating sentiment and innovative spirit with noble education and artistic inculcation, can we "build moral and educate people". The report of the 19th Party Congress emphasizes that "a strong culture is a strong nation, a strong culture is a strong nation" and "a strong youth is a strong nation". Music education in colleges and universities is not simply to impart book knowledge like music general knowledge and theory, nor is it simply to practice music skills, but to cultivate noble moral pursuits of college students by means of art, and to shape successors in line with the development of socialist cause, which is also the important role of music education in colleges and universities in the new era. This requires music teachers to be both the inheritors and disseminators of music culture, as well as the creators and developers of music culture. To build a strong cultural nation, on the one hand, music teachers are required to learn to teach the excellent music culture of ancient and modern China and to create and develop the Chinese culture by combining the needs of the new era; on the other hand, music teachers are required to take up the role of messengers of spreading the excellent Chinese culture and guiding young students to establish the correct values. As the successor of the socialist cause, music teachers in colleges and universities should consciously strengthen their moral and ethics, actively disseminate and create music culture with exquisite artistic attainments, strong responsibility and mission consciousness, cultivate more excellent talents for the prosperity and development of Chinese music culture, and provide motivation and support for building a strong cultural country and realizing the "Chinese dream". We will provide motivation and support for building a strong cultural nation and realizing the "Chinese Dream".

# 4. THE PATH CHOICE OF BUILDING THE TEACHER MORALITY OF COLLEGE MUSIC TEACHERS

So, in the background of the new era, how should we cultivate and build the moral style of music teachers in colleges and universities?

First of all, we should establish "one goal". Xi Jinping pointed out that the majority of literary and artistic workers should aim to be "moral and artistic". From the professional nature, music teachers are not only a literary artist, art preacher, teacher, solver, but also the forerunner of aesthetic education. Therefore, music teachers should establish the life goal and value pursuit of "moral and artistic excellence". On the one hand, music teachers should deeply recognize and accurately grasp the dialectical relationship between "virtue" and "art". the professional level and teaching ability of music teachers depend on their "virtue" level, and only with noble "virtue" can they become excellent "spiritual engineers". Only with high "moral" can we become excellent "spiritual engineers". the only way to bring the nurturing function of music art into good play is to improve the attainment and cultivation of music art, and to enhance the professional level and teaching ability of music. On this basis, we insist on the unity of "virtue" and "art", and make both of them Complement each other, the line of long-lasting. In September 2014, Xi Jinping put forward the "four" requirements at Beijing Normal University, that is, to have "ideal beliefs, moral sentiments, solid knowledge and a loving heart. [3] That is to say, the four qualities should be "ideals and beliefs, moral sentiments, solid knowledge, and loving heart. [3] That is to say, in the aspect of "virtue", we should have "moral sentiment, benevolent heart, " that is, adhere to the "four self-confidence", with a moving melody, profound mood, sincere the students will be infected and inculcated with moving melodies, profound moods and sincere emotions, and will be guided to aspire to the true goodness and beauty and to pursue it. In the spirit of "virtue is the teacher, the body is the model", selfless dedication, teaching by virtue, teaching by body, so that the noble personality in the implicitly shaped the pure hearts of students. In the aspect of "art", "in order to make students gain a little knowledge of the bright light, teachers also hunger to learn new knowledge, new skills, new technologies, broaden the horizons of knowledge, update the structure of knowledge, absorb into the whole ocean of light", which requires music teachers should have a broad knowledge base, deep knowledge of the art of music. This requires that music teachers should have a profound knowledge base and a deep cultivation of music art. To this end, music teachers should continue to learn professional knowledge and skills, improve their teaching abilities, and enrich their teaching

methods. In music practice teaching, it is necessary to improve the professionalism and personality of music teachers, to "teach people to fish" and to "teach them to fish", to help students ignite the light of wisdom, and to enhance the foundation and motivation of students' overall development. In December 2016, Xi Jinping pointed out in the national ideological and political work conference of colleges and universities that to strengthen the construction of teachers' morality and style, teachers should adhere to the principles of "unity of teaching and education, unity of teaching by words and teaching by example, unity of devotion and concern for society, unity of academic freedom and academic regulation", so as to cultivate teachers' morality and moral integrity. We should also train teachers to establish themselves, learn and teach with virtue. [4] the "four unities" are the new historical mission given to the people's teachers in the new socialist era, to adhere to the goals and directions of schooling, to adhere to cultural self-confidence, to adhere to the core socialist values, and to have a historical responsibility, an international vision, an upward political consciousness, a downward people's sentiment, and an inward rational judgment. have an inward rational judgment. Music education in colleges and universities should not forget the original intention. the original intention of music education is to cultivate qualified music teachers of primary and secondary schools and artistic talents of virtue and skill, to popularize music knowledge and cultivate character for college students. This also points out the direction and provides important guidelines for the construction of music teachers' ethics. All types of colleges and universities and music teachers should adhere to the "four unity", a deep understanding of the serious and noble responsibility they bear, cherish the honor of teachers, seriously maintain the professional ethical dignity of teachers, and take pride in it, play the spirit of hard work and dedication, and improve the professional moral realm. First, adhere to the unity of teaching and educating people. Just because of the characteristics of music education, so that music teachers in the teaching style and input is different from other teachers expertise to teach, and the key to be able to train good people, that is, the overall quality of teachers, which requires both profound professional training, serious attitude to learning and down-to-earth dedication, but also the temperament and positive motivation to learn relevant knowledge. the most obvious thing from the past training of music teachers is that the training of professional skills is overemphasized, while the training of professional quality of music teachers is neglected, and the performance of classroom teaching methods, teaching methods, the aesthetic ability of music and the integration of other disciplines is insufficient. Therefore, music teachers in colleges and universities should constantly enrich their knowledge system, improve their teaching skills and enhance their nurturing skills, so that teaching and nurturing can work in tandem and strive to achieve the value goal of education career. [5] Second, insist on the unity of

teaching by words and teaching by example. According to the research results of psychology, in the mutual communication of people, only 30% of the amount of information is transmitted through language, and the remaining 70% is conveyed by the second language system such as body movements and facial expressions. [6] the good behavior and noble character of music teachers should be reflected in all aspects of teaching and education, and "teaching without teaching" is better than "teaching". Therefore, music teachers should set an example in the process of teaching and educating people, be consistent with their words and actions, take the lead, influence and drive students with good spirit and noble qualities, help students to improve themselves, improve their moral cultivation, enhance their ideological quality, practice moral principles, and promote the overall development of morality, intelligence, physical fitness and beauty. Third, adhere to the unity of the pursuit of learning and concern for social development. To learn and learn means that music teachers should constantly study and enrich themselves, improve their professional knowledge and skills, and meet the basic professional quality requirements of music teachers. On this basis, they should also pay attention to the laws of social development and the requirements of the times, analyze the connotation of music education from the perspective of the new era, respond to the demands of the times and new propositions of the times with their unique music art, and make positive contributions to the construction of a strong educational country. Fourthly, we insist on the unity of theoretical research and artistic practice. Academic authenticity requires music teachers to go deeper into life, deeper into the grassroots, and conduct theoretical research based on field collection and research. Art practice and art communication are important links of academic research for music teachers in colleges and universities. In academic communication, music teachers should not be ashamed to ask questions, be sensitive and learn from each other, cut each other's throats, learn from each other, find inspiration for creation and produce innovative results. On the other hand, music research, which exists as an ethical form, should actively study the laws of art development from the perspectives of humanities, ethnography and folklore, discover artistic materials from life, and promote the academic prosperity and development of music education in practice.

Again, six mechanisms should be established. 2014, the Ministry of Education promulgated the Opinions on Establishing a Sound Long-term Mechanism of Teacher Moral Construction in Colleges and Universities, fully recognizing the importance and urgency of strengthening and improving teacher moral construction in colleges and universities in the new era, and proposing the establishment of six mechanisms including education, publicity, assessment, supervision, incentive and punishment. Colleges and universities at all levels should establish and improve the six mechanisms with their own reality. [6] First, universities at all levels should improve the mechanism of teacher morality and style construction. Schools should set up a special "working group on teacher morality and style", which is responsible for the formulation, implementation and execution of specific work plans. Through the training of teacher moral and teacher style education, lectures on teacher moral and teacher style or reports on outstanding teachers' deeds, the ceremony of old teachers' honorable retirement and the oath of new teachers' induction, etc., we can educate the teaching team including music teachers on ideals and beliefs, mental health, etc., so that every music teacher can consciously abide by the professional ethics of teachers and become a force for cultural construction in the new era; On the other hand, music teachers should be organized to carry out activities such as volunteering, sending operas to the countryside and investigation and research, so as to transform teacher ethics education into concrete practice and promote the organic unity of music teachers' knowledge and action, learning and doing.

Second, to strengthen the publicity, enhance the selfconfidence and sense of honor of teachers. the campus culture should be built with the core content of cultivating good teacher morality and style, excavating the advanced deeds of "moral and artistic" music teachers, refining the spirit of "moral and artistic" music teachers, and making full use of the communication media to strengthen the propaganda to the campus and outside in multiple ways and forms to show the spirit of "moral and artistic" music teachers. the company will also make full use of communication media to strengthen the propagation of the spirit of the music teachers, to show the spirit of the music teachers, and to form a good environment and atmosphere of respect for teachers and education on and off campus.

Third, the practical implementation of the establishment of a perfect assessment mechanism. Music teaching is subjective, practical and flexible, so it is important to standardize teachers' class time and establish a strict attendance assessment and supervision system to ensure the implementation of teacher ethics and teacher style construction. Through teachers' self-assessment, students' assessment, colleagues' mutual assessment, unit assessment and other diversified supervision methods, the music teachers' moral and ethical situation will be assessed and the results will be linked to their post employment and title evaluation to motivate music teachers to consciously strengthen their moral cultivation and artistic cultivation. the improvement of the appraisal mechanism is to first improve the supervision mechanism. the secondary colleges should establish a supervision system led by teachers and participated by students to conduct regular supervision of teachers' (including music teachers) teacher moral and teacher style, find problems and solve them in time to effectively avoid the problem of music teachers' teacher moral misconduct. It is to establish a perfect incentive mechanism. Education administrative departments and schools should include the music teachers' moral and ethical situation into the first condition of the evaluation of awards and merits, in the case of equivalent conditions, the "moral and artistic" teachers are given priority in promotion and promotion. It is to establish and improve the punishment mechanism. For music teachers, they should be given timely criticism, education and guidance; if the problem is serious, they should be given warnings, demerits, demotions, demotions or even dismissals in accordance with the rules and regulations, so as to form a strict normative trend, so that music teachers can transform "moral and artistic" into a highly conscious pursuit.

#### 5. CONCLUSION

In the background of the new era, for colleges and universities, they should promote the institutionalization and normalization of teacher moral and teacher style construction of college music teachers by establishing and improving the mechanisms of education, propaganda, assessment, supervision, incentive and punishment; for music teachers, they should consciously establish the life goal and value pursuit of "moral and artistic excellence", and consciously do the following in practice For music teachers, they should consciously establish the goal and value of "moral and artistic" life, consciously achieve the "four unities" in practice, pass on the way of music, teach the profession of music, solve the confusion of music, educate students, nurture students and guide students with noble moral quality, profound musical art cultivation and high education and teaching ability; for the society, the whole society should create and form the environment and atmosphere of respecting teachers and education, so as

to cultivate "moral and artistic" teachers. For the society, the whole society should create and form an environment and atmosphere that respects teachers and provides a strong social and cultural soil for the cultivation of "moral and artistic" music teachers.

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### An Analysis of Baroque Music Art Style

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**Abstract:** With the rapid development of modern society and economy, our country people's music art appreciation ability will be improved, music can enrich our daily life and improve the aesthetic ability, therefore we need to actively appreciate and explore all kinds of music styles, and the Baroque music has made great contribution for western music, it is worth exploring its music art style. Based on this, this paper gives a brief overview of Baroque music and studies the artistic style of Baroque music.

Keywords: Baroque music; Artistic style; Discussion and analysis

#### **1. INTRODUCTION**

The period of Baroque music is after the Renaissance, and the specific origin of the word Baroque is not clear. At the beginning, the word Baroque was used in France, which did not mean positive, but more derogatory. However, with the improvement of people's ideological realm and the continuous reform and innovation development, they finally had a brand new cognition of Baroque music.

#### 2. OVERVIEW OF BAROQUE MUSIC

At present, people's cognition of Baroque music is still in a vague state of thinking, or even in a situation of ignorance [1]. However, the baroque music has a very important contribution to the western world, and the music art style plays a role in promoting the development of western music. Therefore, our people should understand the baroque music art style properly, absorb its valuable experience, and promote the green and efficient development of Chinese music. In addition, Baroque music developed a variety of musical forms, such as early symphonies, variations, concertos, and classical suites, which laid a firm foundation for the great success of Western music.

From the perspective of the background of the emergence of the Baroque music style, it is mainly through the music composers of this period combined with a number of artistic style features to innovate their own music works, fully reflect their own emotions and vitality, and finally form the Baroque music art style. In addition, there are many different cognition in the Baroque period, and its influence factors are many, such as class struggle, territorial expansion under the oppression of violence and so on. However, with the broadening of people's minds, the cognition of Baroque music is gradually unified and divided into various artistic styles, which ultimately played a positive role in the development of western music and still has profound influence.

### **3. THE ANALYSIS OF BAROQUE MUSIC ART STYLE**

Under the background of the new era, different people have different cognition of Baroque music. For example, some people think that the artistic style of baroque music is like youth, which is distinct from children and adults, and that this artistic style of music has distinct characteristics, both calm and emotional instability. Baroque music art style can be summarized as follows: 3.1 Playing bass support melody

The harmonic bass in Baroque music actually means that the whole musical works belong to the independent low part, and this style of music has little melody and modification, while ensuring the stable operation of the whole melody and rhythm of the music, so Baroque music has distinct artistic characteristics [2]. In addition, the tone bass has other names, such as the number bass. and it is a kind of musical shorthand. However, this music shorthand can only write two parts, such as the middle part is below or above the first part of the music, through the relevant personnel will make reasonable use of numbers to mark, and finally through the distinctive mark efficient performance, it can be seen that the Baroque music art style can also help the performer to improve the performance efficiency and quality to a certain extent.

3.2 The fluency of multi-voice melody

From the perspective of the current artistic style of Baroque music, the main stylistic characteristic of multi-part melody is fluency, which can play a positive role in music works. Meanwhile, the fluency of multipart melody is fully reflected in the music of Bach, which has brought many great music works to people [3]. Among them, Bach is a representative of polyphonic music, his music works have distinct characteristics, such as rich content, beautiful melody and so on. In addition, the fluency of multi-voice melodies in Baroque music artistic style brings new opportunities and challenges to music. By combining its artistic style, people can feel stable and amazing when hearing it.

3.3 There are distinct characteristics of strong and weak contrast

From the characteristics of baroque music art style, there is a distinct contrast between strong and weak characteristics, which can help listeners quickly and efficiently feel the charm of music art. First of all, people in the Baroque period had a high pursuit of all kinds of events. No matter what happened, they always paid attention to facalism, that is, the pursuit of extreme gorgeousness. Therefore, the Baroque music style in this period was mainly reflected in the ups and downs of the volume, so as to form a sharp contrast between strong and weak. Secondly, most composers use strong and weak volume contrast to create, and can play a positive role in their own works; Finally, with the distinctive contrast between the strong and weak of Baroque music art style, most composers actively use this feature and infuse it into their own music works, with the purpose of highlighting the Baroque music art style.

3.4 Compare the change of timbre

Baroque music art style has distinct timbre changes, which can play a positive role in the performance of wind bands, among which wind bands mainly use harp and keyboard instruments. In addition, in order to emphasize the artistry of musical works, string music usually harmonizes on the bass line, and finally realizes the contrast change in timbre and improves the performance of musical works.

#### 3.5 Use decorative style

From the perspective of the formation of the current artistic style of Baroque music, there is the use of decorative style. Because of the high pursuit of decoration in the Baroque period, most composers would choose to add appropriate grace notes in the position of music works with vibrato. In the Baroque period, composers pursued high pursuit of their own music works, such as elaborating the melody of music works, so it can be seen that composers in the Baroque period had a high enthusiasm for creation, and they would transform simple music melodies into music works with rich content and distinct changes. In addition, grace notes can be clearly reflected in the excellent works of music writers such as Luli and Rameau. Even in the modern background, composers often use grace notes for reference, with the purpose of enriching the content of their own music works.

3.6 Attach importance to emotional expression and dramatic features

In addition to the above analysis of Baroque music art style, Baroque music art style attaches importance to emotional expression and dramatic characteristics. In the Baroque period, most musicians believed that emotion was more important than everything, so they must ensure that the content of their music works contained emotional revelation and expression. They usually adopted multiple musical techniques to achieve this purpose, such as grace notes, contrasting timbre and contrasting volume. In addition, musicians enrich the content of their works with the help of a number of Baroque music artistic style characteristics, while increasing the emotional and dramatic expression of musical works.

#### 4. CONCLUSION

According to the analysis of this paper, Baroque music has multiple meanings, and in the earliest period, it does not represent a positive meaning, but more derogatory meaning, which is also specifically elaborated in this paper, and at the same time, this paper carries out a series of analysis on the artistic style of Baroque music. For example, the harmonic bass supports the melody, the fluency of the multi-part melody, the distinct contrast between strong and weak characteristics, the change of the contrasting timbour, the use of decorative style, the emphasis on emotional expression and dramatic characteristics, and other aspects, hope to provide some experience for reference.

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## New Concept of Visual Communication Design in Digital Age

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Abstract: The rapid development of information technology has brought great impact to all industries. Now in the digital era, the visual communication design industry is seeking a breakthrough and introducing the application of digital technology. It can be said that the popularity and application of digital technology provide for the development of visual opportunities communication design, but there are also challenges. Through the application of digital technology, it has brought great influence to the traditional visual communication design, involving the content level and the form level. Based on this, the new concept brought by digital technology should be applied in the visual communication design at present, and the innovation of content and form. In this regard, the following article will briefly explore the new concept of visual communication design based on the digital age.

**Keywords:** Digital age; Visual communication; Design; New concept

### 1. VISUAL COMMUNICATION DESIGN IN THE DIGITAL AGE

At present, visual communication design mainly uses the characteristics and connotation works of the Times of visual media, so as to better express the design art of specific information, pass the design concept of designers to the public, help designers and the public to build a bridge of communication, so that designers can accurately understand the needs of the public. In the digital age, the existing economy and technology has been supported by more new technologies and new materials, creating more conditions for the design mode on the original basis, realizing the integration of traditional design and new technology, forming a new form of visual communication design, which is more in line with the public demand and promoting the common development of science and technology and design. In addition, with the emergence of new communication tools and digital technology, the way and effect of visual communication design has been greatly optimized, because designers have applied new technologies to it, and achieved a virtuous cycle on the original basis, breaking traditional design concepts, as well as the planar, static and rigid design pattern, so that visual communication design has become more diversified and distinct. Bring great visual impact to people. In addition, the designer can also use relevant modern technology to modify the design works, re-conceive the works without changing the original artistic conception of the works, and integrate the author's thoughts and emotions into the works. the two coexist, and accurately convey the

designer's design ideas to people, so that the public can accept them as soon as possible, so as to realize the rapid promotion of visual communication design [1].

# 2. THE NEW CONCEPT OF VISUAL COMMUNICATION DESIGN IN THE DIGITAL ERA

2.1 The new concept of visual communication design in the technical field

With the development of the Times, visual communication design must adapt to the trend of technological development, because the digital age can provide more material help and inspiration for visual communication design, so that the design scope of visual communication design is wider, the content is more rich, can meet the diversified needs of the public. Thus, it can be seen that social existence determines visual communication design, and society will also limit the development of visual communication design to a certain extent. In the current digital era, the core of scientific and technological development is the development of computer, whose development speed is faster and faster, and performance is more and more perfect. If computer performance is applied to visual communication design, it can provide more high-quality material basis for design and help designers work. However, the premise is that the visual communication design must be properly adjusted according to the development of computer technology, enhance the fluidity of the content of the communication, so as to highlight the special performance of computer connotation of the technology, the visual communication design accurately and quickly transferred to the next link, to ensure the smooth followup work. In addition, visual communication design can also promote the development level of digital era technology, because digital technology is the product of the digital age, in the process of development will affect and restrict visual communication design to some extent, but visual communication design will also promote modern science and technology, the two complement each other and achieve each other, so designers must use digital technology reasonably. And timely update, to better design to communicate the content, so that it is in line with the public demand. At the same time, in the digital age, media is developing in the direction of diversification, and the development of information technology has improved the quality of media, highlighted important position in its visual communication design, and increased the dependence of visual communication design on media. At this time, designers must integrate visual communication design

and media. Finally, a multi-media integrated visual communication design process is formed to broaden the channels of content transmission and quickly achieve the core concept goal [2].

2.2 New concepts of visual communication design in the field of art

2.2.1 Innovative development of visual communication design

In any job, innovation is a very important link, which can provide impetus for the development of something and achieve the goal quickly. Visual communication design is the same, the importance of innovation in this work can be imagined, can reflect the soul of visual communication design work, improve the quality of the work, better attract the public eye. For designers of visual communication design, they must attach importance to the development of innovation work, start from multiple perspectives, comprehensively consider and evaluate whether their imagination and creativity meet the requirements of the digital age, so as to make changes and keep up with the pace of the development of the Times as soon as possible. In addition, with the acceleration of social development, people's living conditions and quality are constantly improving, and then the ideological concept has changed, become more diversified, choose to pursue individuality, put forward higher requirements for visual communication design content and works, requiring the design of fixed products must get rid of the concept of sameness, which requires designers to walk into life, into the masses, To accurately understand the requirements of the public for design, and then make integration, continuous innovation, only to meet the psychology of the pursuers can highlight the innovative design ability of designers, and test whether it is in line with the position of designers.

2.2.2 Popular development of visual communication design

For visual communication design work, no matter how its content and form change, its fundamental significance will not change, always has the characteristics of serving the public, so as to have the strong support of the masses, to ensure the visual communication design to achieve long-term development. Based on this, designers must play their own role, so that the design not only has profound connotation, but also has the characteristics of straightforward, simple and interesting, so that people can see the key point at a glance, so as to have the power to continue to watch, improve the viewing volume of design works. Thus, it can be seen that the development of visual communication design cannot be separated from the support of the masses. When more and more people start to pay attention to visual communication design works, the channels for transmission and communication will be more extensive and effective, and the coverage will be broader in the society, so that more people will know and understand visual communication design, and finally achieve better development [3].

#### **3. CONCLUSION**

The so-called visual communication design, in essence, is a design discipline with rapid changes and rich content, covering a wide range of areas, and has a certain correlation with the visual information received by people, so it can meet people's diverse visual needs. the current digital age, a variety of advanced digital technologies continue to emerge in society, not only bring convenience to people's production and life, but also bring the corresponding impact, to create value for all walks of life. Visual communication design is no exception, the application of digital technology has accelerated the innovation and progress of visual communication design, broadened the field and concept effect, increased the form, acquired new ideas and concepts on the original basis, can greatly change people's life concept and way of life, brought a huge impact to all sectors of society, in order to let more areas quickly accept visual communication design. Get a foothold in the market.

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## A Study on the Integration Path of Regional Traditional Culture and Vocational Skills Training

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Abstract: This paper addresses the issues of nonsynchronization between the cultivation of craftsmanship and vocational skills training in vocational schools. It actively connects with the needs of the intelligent manufacturing industry, focuses on serving the development of advanced manufacturing, connects with the entire process of product production, refines vocational skill points, and establishes a skill matrix. From the two dimensions of traditional culture and modern Regional Traditional Culture, it deeply explores the connotations of the Regional Traditional Culture such as striving for perfection and innovating while maintaining integrity. It constructs a curriculum system that deeply integrates "craftsmanship spirit+vocational skills", innovates the craftsman practice education model, forms process evaluation, result evaluation, value-added evaluation, and comprehensive evaluation indicators. Through the study and practice of the path of integrating Regional Traditional Culture into vocational skills training, a group of craftsmen talents have been trained, providing a theoretical and practical basis for exploring the implementation of on-site engineer training.

Key words: Vocational skills, Traditional Culture.

#### 1. INTRODUCTION

Culture is an important source of a nation's vitality, cohesion, and creativity. It is the lifeblood of a nation and the spiritual home of the people. According to different regions and historical cultures, China has formed many regional traditional cultures. In the glorious course of more than 5, 000 years of Chinese civilization, Regional Traditional culture has always played an important historical role [1]. the characteristics, connotations, and reasons for the formation of excellent traditional culture in the new era have rich explanatory space in economics, science, and philosophy. the excellent culture can be creatively transformed and innovative developed, and traditional culture can be integrated into the training of skilled talents [2]. Starting in March 2023, Zibo barbecue went viral, becoming a cultural communication phenomenon, bringing new changes to the transmission path and method of regional traditional culture. the traditional culture of the region was quickly spread in a short time with the help of new media. How to use the phenomenon-level event to examine the inheritance path of traditional culture has academic and practical value.

#### 2. THE REAL DILEMMA OF INTERGRATING TRADITIONAL CRAFTSMAN CULTURE INTO VOCATIONAL SKILLS TRAINING

The identity of students changes constantly with their own roles, and there are multiple relationships, such as teacher-student relationships, father-son relationships, master-apprentice relationships, and leader-employee relationships. When excavating regional traditional culture, attention should be paid to coordination with campus culture, corporate culture, socialist core values, family culture, etc., and the internal coordination of each subculture and their mutual coordination, jointly revolving around the target to provide spiritual support for the growth of students.

Vocational experience is not the experience of one person, but should be the experience of a team, and team members should have a larger extension, such as professional leaders, corporate experts, educational experts, etc., to form an expert system. Vocational experience should be progressive and dynamic, and may be affected by various factors such as the hardware facilities of the school, the quality of student sources, and the teaching attitude of teachers, because external influences will also affect the formation of thinking and the feedback of experience.

At present, in the reform of textbooks, there is no application of textbooks that deeply integrate culture and profession. In the difference in student cognition changes and realization processes, how to let culture enter the classroom and form written materials for communication and inheritance requires teachers to research and explore.

#### 3. THE IDEA OF INTERGRATING REGIONAL TRADITIONAL CULTURE AND VOCATIONAL SKILLS TRAINING

The traditional Regional Traditional Culture mainly focuses on the culture produced after the collision and fusion of Qi culture, Lu culture, and Dongyi culture in the ancient Qilu cultural circle during the Spring and Autumn and Warring States periods. This includes excavating the connotations of the craftsmanship spirit contained in ancient books, revolving around the refinement of the production preparation process, standardization of production links, and strict quality management, which cover the entire product production process. It refines the quality spirit of striving for perfection exhibited in each link, such as reflecting the meticulousness and rigor of production preparation and raw material selection with "the sky has time, the earth has energy, and the material has beauty". According to the entire production process, the complete connotations of the craftsmanship spirit are sorted out, forming a case of educating people with traditional culture with the main line of striving for perfection. the modern Qilu craftsman culture takes the Qilu craftsmen and skill masters selected in Shandong Province in recent years as research objects, extracts the connotations of the craftsmanship spirit of focus and innovation reflected in them, and forms a case of educating people with the craftsmanship spirit of the new era with the main line of innovating while maintaining integrity.

### 3.1 THE KEY CORE OF CRAFTSMANSHIP SPIRIT CULTIVATION "TEACHERS AND STUDENTS"

The concept of "student-centered" needs to adapt to the changes in the classroom, and explore what kind of teaching methods can adapt to the comprehensive development of students' moral, intellectual, physical, aesthetic, and labor. In teaching, we should pay attention to students' learning experience, guided by theories such as the "experiential learning circle", clarify the subject status of students, complete the role change from "passive acceptance" to "active exploration", and awaken students' sense of ownership.

### 3.2 CULTURAL POLE IN CURRICULUM REFORM: "CULTURAL ELEMENTS"

The integration of regional traditional culture and vocational education also needs to be deep, "internalized in the heart, externalized in action" to help students improve their own value. In the curriculum reform, analyze from five dimensions: professional spirit, humanistic spirit, professional spirit, innovative spirit, healthy personality, and moral quality, set up 30 observation points, and establish a cultural element table. 3.3 SKILL POLE OF CRAFTSMAN-TYPE TALENT TRAINING: "VOCATIONAL SKILL CLUSTER"

Sort out the four-in-one logical relationship of "postcourse competition certificate", connect with job requirements, connect with skill competitions, and connect with the requirements of vocational qualification certificates. Drawing on the production operation management model, starting from the knowledge and skills required for the manufacturing process and product service process, the existing professional basic courses, professional core courses, and practical training courses and other professional ability courses are modular designed. Through "three connections", vocational skill points are refined, multiple skill points form a skill cluster, and a skill map that vocational college students must master is constructed according to the difficulty and workload of the skill points. Clarify the growth path of students from basic skills, design thinking skills, self-learning growth skills, to creative skills.

4. EXPLORATION AND PRACTOCE OF THE PATH OF INTERGRATING REGIONAL TRADITIONAL CULTURE INTO VOCATIONAL SKILLS TRAINING

4.1 ESTABLISH A CLOSED-LOOP CONTROL SYSTEM MODEL

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Both classical and modern control theories achieve corresponding control objectives by applying appropriate control strategies to the controlled object [3], which is similar to the cultivation of craftsmanship in students and the formation of certain values. Based on the characteristics of the electrical automation technology professional group, the application of control theory to guide the cultivation of college students' craftsmanship spirit helps to analyze the factors affecting the cultivation of craftsmanship spirit more quickly and better. the real-time feedback mechanism of the new generation of information technology can timely grasp the problems in the implementation process and adjust the implementation strategy of craftsmanship cultivation.

4.2 CONSTRUCT A HIERARCHICAL SKILL EDUCATION SYSTEM THAT DEEPLY PENETRATES AND INTEGRATES "CRAFTSMANSHIP SPIRIT+VOCATIONAL SKILLS"

Based on constructive educational theory, closely connecting the technical fields of electrical design, mechanical design, program control, measurement and data processing, equipment installation, debugging, operation and maintenance in the work process of intelligent manufacturing, constructing 5 skill modules, connecting with the post needs of intelligent manufacturing, constructing N corporate project training packages, constructing "5 modules+N projects" professional directions and skill modules, teachers and teachers jointly teaching and researching, vocational level certificate certification standards and course standards and talent training programs jointly revised, realizing course upgrade and certificate upgrade synchronization update; deeply excavating the connotation of craftsmanship spirit, connecting with the industry, post combing core skill points, through the study of reconstructing the curriculum system, realizing the craftsmanship spirit throughout the entire process of education and teaching, promoting the comprehensive development of students.

#### 4.3 CONSTRUCT "TEACHING CLASSROOM+WORK CLASSROOM+CLOUD CLASSROOM" THREE CLASSROOMS

The teaching classroom uses the integrated theorypractice training room as the carrier, and completes the learning of theoretical knowledge and the training of single skill points in modules; the work classroom is led by corporate robot production cases, and the skill competition and 1+X vocational skill assessment equipment are used as carriers, through the integration of post-course competition certificates, combined with new standards, new technologies, and new processes to complete more complex practical projects and comprehensive skills training; the cloud classroom is based on the concept of "Internet +", with the help of VR/AR new generation information technology, implement cross-time and space learning, remote virtual simulation training. the teaching classroom is mainly inspirational teaching, guiding students to experience

knowledge learning; the work classroom strengthens the function of "training", fits the actual work scene, solves actual problems, masters technology, trains skills, internalizes professional qualities, and lets students participate in it under the guidance of teachers to gain personal experience, and then reflect and summarize the observations made, generalize theories or results, and finally apply them to practice. the cloud classroom focuses on "evaluation", uses cloud technology to accurately grasp the learning situation, carries out online virtual training experience, and breaks the barriers of practical classroom learning.

5. INNOVATE THE "TEACHING-LEARNING-DOING-TRAINING-EVALUATION"

#### INTERGRATED TEACHING MODEL

Starting from emphasizing students' learning experience and stimulating the improvement of students' innovation, practice and application abilities, guided by theories such as "experiential learning circle", it is clear that teachers are the leaders, students are the main body, closely revolving around the characteristics of learning, professional needs and post standards, and improving professional literacy. Before class, autonomous learning (cloud classroom), further clarify the teaching focus and difficulties of the lecture, more accurately grasp the learning situation; during class, interactive learning (offline intelligent manufacturing workshop), complete the process and summary evaluation of students. achieve skill advancement; after class, expand learning (cloud classroom+school-enterprise factory), improve students' ability to transfer classroom knowledge and comprehensive evaluation of students.

### 6. ESTABLISH A MULTI-DIMENSIONAL EFFICACY EVALUATION INDICATOR

Establish an evaluation indicator for the value connotation of the Regional Traditional Culture in the new era, emphasizing process and value-added evaluation, refining three first-level indicators of general ability, social ability, and professional literacy, cognitive and practical ability, problem-solving ability, self-control ability, innovation ability, information acquisition ability, expression and induction ability, team cooperation ability, labor safety, 5S professional literacy, craftsmanship spirit and other ten second-level indicators, design assessment ability hierarchy and observation points, so that vocational skills training is transformed into joint cultivation of school education, social education, enterprise education, and family education, and the whole process, full-time, multichannel shaping of skilled talents with craftsmanship spirit [4].

#### 7. EDUCATIONAL EFFECT

Students gain personal experience and gains in the process of completing tasks and working practices, learn by doing, complete the role change from "passive acceptance" to "active exploration", awaken students' sense of ownership, and significantly improve classroom activity. Through the analysis of the learning habits and preferences of the teaching objects, combined with the ARCS motivation model theory, led by the project and oriented by the results, guide students to complete the task of results through team cooperation and practical inquiry, effectively stimulate students' learning motivation. Through the discovery and resolution of problems in the practice process and the achievement of project results, students can achieve efficient learning and high gain experience in interesting and challenging classrooms. Through the crossintegration of the "three classrooms", on the basis of integrating teaching and doing, through the cloud classroom, break the barriers of the classroom. In one semester, students visited a total of 2893 times, with a total visit time of 15344 minutes, uploaded 242 course resources, posted 693 times in the course discussion area, and issued 22 course assignments. Students can effectively use the cloud classroom for pre-class autonomous learning and post-class extended learning, broadening the space and time dimensions of student learning.

#### 8. CONCLUSION

This article takes the integration research of Regional Traditional Culture and vocational skills training as a breakthrough, uses the concept of control theory to establish a mathematical model for cultivating skilled talents with craftsmanship spirit, deeply explores the spiritual connotation of Oilu craftsmen, analyzes the influencing factors of craftsmanship spirit, reforms the current vocational education curriculum, focuses on the construction of craftsmanship spirit evaluation indicator system, promotes the training of skilled talents in vocational colleges from theoretical and practical levels to better adapt to the actual needs of society and enterprises, lays the foundation for talent training and quality evaluation oriented to on-site engineers in advanced manufacturing, and enriches the theoretical results of Regional Traditional Culture cultivation.

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## Teaching Reform of Hydraulic and Pneumatic Technology Based on OBE Model

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Abstract: Under the concept of Outcome based Education(OBE), the teaching mode of Hydraulic and Pneumatic Technology is reformed. Teaching content is organized according to the project results, strengthening the industry background of hydraulic system application, integrating the teaching process with reality, strengthening the selection and application of hydraulic components, so as to achieve the purpose of analyzing and solving complex engineering problems. This teaching organization model also has certain reference significance for other professional courses.

Keywords: Outcome based Education(OBE), Hydraulic and Pneumatic Technology, Reform in Education.

#### 1. INTRODUCTION

Hydraulic and Pneumatic Technology is a professional course for mechanical students in higher vocational colleges. It has the characteristics of abstract content, complex diagram and strong practice. This course is offered in mechanical disciplines of all colleges and universities, with a wide variety of teaching materials, including hydraulic (pneumatic) components, basic circuit, typical circuit and system analysis and design. The course of Hydraulic and Pneumatic Technology is still carried out in the traditional teaching mode, with teachers and textbooks as the center in most higher vocational colleges in China. Teachers and textbooks are the center, teachers mainly teach through the courseware display in the classroom, students accept the knowledge points taught by teachers. Students didn't have high enthusiasm in learning. So it is urgent to change the traditional teaching method. Adopting the teaching concept based on OBE, taking students as the center, students' achievements as the starting point, and taking actual cases as the carrier to reverse the design of course teaching, can stimulate students' interest in learning, arouse students' enthusiasm in learning, and pay attention to the cultivation of knowledge application ability, so as to achieve the goal of cultivating skilled talents who can understand and master hydraulic pressure for the society.

#### 2. OBE EDUCATION CONCEPT

The OBE model is not only the mainstream idea in the field of international engineering education, but also the frontier direction of engineering teaching reform. the three basic ideas advocated by OBE are student-centered, results-oriented and continuous improvement. [1] OBE education model always adheres to the student-centered teaching concept. All educational activities, educational process and curriculum design are centered around "what students should learn" and "how students

should learn", focusing on the three-dimensional ability output of students' knowledge, ability and quality, and highlighting competency-based education [2-3]. After decades of development in China, OBE education concept has formed a scientific theoretical system, and its research content, research subject and research practice have gone through the process of inheritance, development and innovation. OBE education concept is the theoretical basis of education reform in many colleges and universities, which has been widely valued and recognized by teachers and administrators in colleges and universities, and is considered as the correct direction to pursue excellent education.

Compared with traditional teaching, OBE pays special attention to the idea that every student can get a sense of achievement in learning. Teaching evaluation emphasizes the connotation of achieving learning results and individual learning progress. According to the degree that each student can meet the educational requirements, a scientific and reasonable evaluation system is formulated, with different rating levels for targeted evaluation. It provides reference for teachers to improve teaching by accurately mastering students' learning state and effect.

3. THE PROBLEMS OF TRANDITIONAL "HYDRAULIC AND PNEUMATIC TECHNOLOGY" COURSE

3.1 THE COURSE FAILS TO REFLECT THE APPLICATION CHARACTERISTICA OF THE INDUSTRY

In traditional teaching, the analysis of the hydraulic system is usually through the schematic diagram to tell the students that the hydraulic system includes the power component, the executive component, the control component, the auxiliary component and the working medium five parts, as well as the working principle of the system. the introduction of engineering application, application requirements and working characteristics of the hydraulic system is less, so it is difficult to understand and easy to lose interest in learning for students who learns it. Due to this feature, colleges and universities in different industries and the course show convergence. the course is based on the discipline system, and the content is large and complete. Part of the teaching derivation process is difficult to understand, which is not suitable for the learning situation of vocational students.

### 3.2 MOST EXPERIMENTS AND TRAININGS ARE CONFIRMATORY

Traditional curriculum teaching still emphasizes theory rather than practice. The experimental and training projects of hydraulic and pneumatic transmission circuits are designed, but most of these are verification experiments. When teachers assign experimental tasks, students only perform verification operations mechanically according to experimental methods or practical training steps, lacking subjective initiative and the ability to think and solve problems independently. Although students can learn and master theoretical knowledge through verifiable practical training programs, they lack a systematic understanding of the whole practical training and cannot achieve the purpose of cultivating students' ability to analyze and solve problems. [4]

3.3 STUDENT EVALUATION METHOD IS SINGLE The traditional course assessment of Hydraulic and Pneumatic Technology mainly has two aspects: ordinary results and examination results. Regular grades include attendance, homework, and enthusiasm in class. the examination can only design each knowledge point into a corresponding question, and the basic knowledge point is more reflected in the concept, basic characteristics and rules, which makes the students' "temporary surprise" recitation before the examination, unable to better reflect the ability to use knowledge to solve practical engineering problems, and unable to effectively reflect the concept of OBE. At the same time, the evaluation method is too simple, the evaluation mechanism is not perfect and so on.

### 4. RECONFIGURATION OF CURRICULUM BASED ON OBE

The course of Hydraulic and Pneumatic Technology is carried out through OBE and "Teaching and Doing in One" project. Students can select hydraulic and pneumatic components reasonably, read and analyze the working principle of the gas-hydraulic transmission system by referring to the instruction manual, have the ability to design simple gas-hydraulic transmission system, and carry out the adjustment and fault analysis of work items combined with the requirements of the gas-hydraulic control system.

#### 4.1 RECONSTRUCTION OF TEACHING CONTENT BASED ON WORKING-PROCESS

Starting from the requirements of professional group oriented to job group, centering on talent training objectives, centered on students and guided by "learning results and output", we realize the integrated training of knowledge, ability and quality, and pay attention to the combination of hydraulic and pneumatic technology with electrical control technology, PLC control technology, mechanical design basis and other knowledge. As shown in Table 1, we pay attention to the cultivation of students' ability to think and solve problems, and construct the content system of hydraulic and pneumatic technology course based on OBE Model. Through the investigation of intelligent manufacturing enterprises, the teaching team selected typical examples of hydraulic pressure engineering projects, designed the course teaching content, completed and the corresponding teaching resources, teaching implementation and evaluation standards design.

Table 1 Project teaching content based on OBE

Serial Number	Project Name	Outcomes of Project Learning
1	Cognitive hydraulic transmission system	Be able to set up the hydraulic circuit for reciprocating of grinder table correctly
2	Construction and debugging of hydraulic direction control circuit	Be able to design and debug the workpiece clamping hydraulic system correctly
3	Construction and debugging of hydraulic pressure control circuit	Be able to design and debug hydraulic lifting system correctly
4	Construction and debugging of hydraulic speed control circuit	Be able to design and debug the machine feed hydraulic system correctly
5	Analysis and maintenance of typical hydraulic system	Be able to analyze hydraulic system of modular machine tool correctly
6	Analysis and maintenance of typical air pressure system	Be able to design and debug workpiece clamping pneumatic system correctly

#### 4.2 SCHOOL-ENTERPRISE COOPERATION DESIGN PROJECT CASE(HYDRAULIC AND PNEUMATIC TECHNOLOGY TRAINING ACTIVITY)

Based on the investigation of intelligent manufacturing enterprises, some practical cases of hydraulic and pneumatic technology experiment and training are jointly developed and selected with the cooperation of enterprise engineers. the training programs selected and set by the school-enterprise teaching team break the discipline curriculum system, pay attention to the combination of hydraulic and pneumatic technology and electrical control technology, industrial detection and sensor knowledge, design the training courses based on the post ability, reorganize professional knowledge with the training program as the core, and organize the content of the training program with the task as the center. A series of practical training projects such as installation and adjustment of hydraulic lifting device system, workpiece hydraulic clamping system, assembly machine tool power slide hydraulic system were designed. In the teaching process, the teacher-led, student-centered, group teaching. Students conduct independent exploration and group discussion, design hydraulic or pneumatic circuit, electrical control circuit or PLC external wiring diagram, build hydraulic or pneumatic circuit, electrical circuit and PLC control circuit to achieve the requirements of action control. Students no longer perform verification operations mechanically according to experimental methods or training steps, but have a systematic understanding of the whole hydraulic and pneumatic technology training project through independent exploration and group division of labor cooperation, thus cultivating students' subjective initiative and ability to think and solve problems independently.

4.3 THE CONSTRUCTION OF NEW EVALUTION SYSTEM AND THE DEVELOPMENT OF

## CURRICULUM TEACHING PRACTICE ACTIVITIES

Reasonable and objective evaluation of students' abilities is an important link in the OBE education model, and has a very important impact on the sustainability of teaching reform. It adopts the diversified evaluation mode which combines process evaluation and terminal evaluation, and pays special attention to process evaluation. In combination with vocational skill grade standards, teaching evaluation standards and regular assessment standards are designed. the learning effect evaluation takes task objectives, teaching objectives and the implementation of specific learning activities into consideration, and adopts the whole process comprehensive assessment method combining process and result, in-class and extracurricular, online and offline to achieve all-round evaluation of students. the process assessment is mainly reflected in the introduction of solutions to engineering problems. Because there is no reference answer to the engineering problem, students need to work as a team, consult materials, or even consult professional companies to solve the problem. the teacher grades the problem according to the difficulty of the procedure, the pros and disadvantages of the solution, and gives timely help and guidance to the backward students. the online examination mainly focuses on mastering the knowledge points, while the offline examination adopts the simple answer, analysis and calculation questions. the examination content is one question and one picture, which seems simple, but in fact requires comprehensive understanding, mastering and application of all knowledge points, requiring students to have certain ability to analyze and solve complex engineering problems. the final assessment results are based on the combination of ordinary scores, experimental scores and assessment scores to give students a comprehensive assessment, so as to realize the continuous improvement of teaching quality.

#### 5. CONCLUSIONS

Based on the OBE education model, the teaching organization of the course "Hydraulic and Pneumatic

Technology" is discussed. Through project teaching, knowledge points and skills are fragmented, core knowledge explanation is strengthened, and resultsoriented concept is carried out throughout. the school and enterprise cooperate to build a course construction team, investigate the professional knowledge and skills of liquid pressure required by post groups, and determine typical tasks. Combining engineering examples with the latest research and application results in the hydraulic field, more complex and more reasonable hydraulic system is derived, which has obvious effect on the training of problem analysis ability, design and development ability, and the students have the ability to solve complex engineering problems. At present, this teaching mode has been applied in the teaching process of Hydraulic and Pneumatic Technology in our school, which is a practical exploration of the application of OBE teaching mode in the teaching of vocational and technical courses, which is conducive to enriching the basic theory of vocational education and higher education.

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## Research On Subsidizing Education for Higher Vocational Students

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Abstract: For a long time, the government has attached great importance to the issue of funding for impoverished vocational college students, and the subsidy funds for impoverished students in major vocational colleges are also continuously increasing. However, impoverished students belong to the social special education group and need to develop reasonable and feasible management strategies in teaching and funding. Although in recent years, China's vocational colleges have improved their funding and activities for impoverished students, with the increase in the number of impoverished students, the difficulty and workload of poverty alleviation work in universities are also increasing. Some vocational colleges implement a funding management system, but there are still many shortcomings in terms of funding sources and attention levels. Therefore, strengthening the management of impoverished students in vocational colleges can help improve educational fairness and promote the healthy development of vocational colleges.

Keywords: Supporting and educating, Vocational college, Students.

#### 1. THE CURRENT SITUATION AND PROBLEMS OF FUNDING WORK IN VOCATIONAL COLLEGES

The recent landmark documents, such as the State Council's proposal in 2007 to establish and improve the independent policy mechanism for students with family economic problems in regular undergraduate colleges, vocational colleges, and secondary vocational schools, have gradually increased the intensity of financial support for impoverished students in vocational colleges. [1] While improving the funding work, it puts university funding work first. With the continuous development of socialist modernization and the promotion and implementation of the national 13th Five Year Plan, reducing the number of impoverished people has become the main goal of building a moderately prosperous society in all respects. When reviewing the poverty level of impoverished students, the main criterion should be whether they can afford to attend school. Higher vocational colleges, adhering to the concept of educational projects and building a multifaceted support mechanism, prioritize national independent work. Each national scholarship reward mechanism is gradually maturing, and the diversified scholarship loan scientific examination system is gradually improving, forming an integrated support system of "rewards, subsidies, loans, exemptions, and exemptions". [2]

#### 1.1 THE FUNDING AND EDUCATION MECHANISM FOR VOCATIONAL COLLEGES NEEDS TO BE IMPROVED

For a long time, vocational colleges have had student aid offices specifically responsible for this matter, specifically responsible for material assistance work such as national scholarships, national motivational scholarships, special scholarships, student loans, tuition reduction, and work-study programs for students. However, they are unable to educate impoverished students and do not have corresponding institutional arrangements. Vocational colleges have established a sound funding and education mechanism system to correctly guide educators to receive funding for students, Guide them to have a correct outlook on life and the world, help establish values, and cultivate a sense of gratitude.

#### 1.2 HIGHER VOCATIONAL COLLEGES NEED TO ENRICH THEIR FUNDING AND EDUCATION CARRIERS

Due to various historical reasons, vocational colleges attach great importance to providing material support for students from disadvantaged backgrounds. But they do not attach much importance to support and education work, and the number of people participating in funding and education is extremely limited. the carriers for conducting funding and education are also few, and the methods are relatively backward, which cannot keep up with the trend of the times. Vocational colleges need to increase funding and education work, enrich and innovate funding and education carriers, so that education work can be better carried out. [3]

#### 1.3 INNOVATIVE MEASURES FOR SUPPORTING EDUCATION IN HIGHER VOCATIONAL COLLEGES

The student funding office of vocational colleges actively carries out funding work while carrying out educational work. Due to policy guidance and experience, educational measures are outdated or cannot be invested in research and innovation, making it difficult to innovate current measures. the education work is slightly backward, and the urgent task is for the government, vocational colleges, and society to jointly attach importance to funding and education work, introduce funding and education policies that keep up with the times and the market, form reasonable and innovative funding and teaching measures, and elevate the education work of impoverished students to a higher level.

#### 1.4 THE CONCEPT OF FUNDING EDUCATION IN VOCATIONAL COLLEGES NEEDS TO BE STRENGTHENED

The investment in education funds in vocational colleges started relatively late, with relatively average scale and measures, which also reflects the outdated concept of education fund investment. the development of information in today's society is constantly changing, and people's understanding of values and things is also changing. the concepts used to support educational work should also be constantly updated. Educators should fully understand the importance and necessity of education, constantly learn new principles, update knowledge, adhere to national policies, and do a good job in educational work.

#### 2. INNOVATIVE STRATEGIES FOR SUPPORTING VOCATIONAL COLLEGE STUDENTS IN THE NEW SITUATION

2.1 COMBINING NATIONAL POLICIES AND SYSTEMS, ENHANCE THE AUTONOMY OF VOCATIONAL COLLEGES IN MANAGEMENT, AND FORMULATE MORE DETAILED REGULATIONS

There are many national support systems and policies, and the support is also very strong. If vocational colleges fully comply with the national level systems and policies, sometimes it is inevitable to "be confused" and "read the text without meaning". the reason is that when formulating policies at the national level, it is usually necessary to consider the differences between regions and universities, consider the overall situation, and cannot formulate overly detailed policies for specific universities or student groups. What kind of financial difficulties do families face in terms of student loans in their hometowns? What kind of academic performance is considered excellent? What kind of learning attitude is considered positive and enterprising? the policy documents have not yet explained or defined this. the author suggests that it is possible to strengthen the autonomous management power of vocational colleges, taking into account the local situation of the school and following the national student aid policy, to develop more detailed regulations within the school, making funding and education work more practical and detailed, and improving the effectiveness of education.

2.2 COMBINING THE CHARACTERISTICS OF VOCATIONAL COLLEGE STUDENTS AND USING A COMBINATION OF MODERN AND TRADITIONAL METHODS TO SUPPORT EDUCATION WORK

The funding and education of vocational college students can be said to be more difficult to control than undergraduate and graduate students. In addition to making good use of various platforms, systems, and multimedia facilities, traditional funding and education methods should also be used. Firstly, we should pay attention to students' psychological state and changes through humanized means. Secondly, we should pay attention to intangible forms of support, protect students' privacy, and explore forms of support; We should pay attention to the ideas of various types of students and combine paid and unpaid funding; It is also important to pay attention to the diversity of support objects, explore typical cases, and continuously stimulate the confidence of recipients. Once again, the close connection between ideological and political education and educational funds in terms of basic types, environmental optimization, utilization of educational content, basic methods, evaluation and management, etc., effectively incorporating ideological and political education into educational funds, and improving the effectiveness of funding investment. By utilizing methods such as counselors and homeroom teachers' heart-to-heart conversations, ideological and political education, professional course teachers' classroom infiltration, peer guidance, and club promotion, and comprehensively utilizing communication channels to penetrate the theory and practice of funding and education, we can psychologically and ideologically understand the connotation and significance of vocational college students' acceptance, understanding, and funding.

### 2.3 ENSURE OPENNESS, FAIRNESS, AND IMPARTIALITY

After students enter vocational colleges, they should objectively review the personal information of impoverished students from impoverished families, listen to student feedback more, confirm whether the situation is true, and strive to expand the amount of subsidies for impoverished students to ensure true fairness in education. the evaluation and determination of the qualifications of impoverished students is of great significance in the management of impoverished student aid, and is a core part of the work, which is related to whether the aid for impoverished students is fair and equitable. At present, the assessment and determination of impoverished students in vocational colleges has become a major challenge, and regardless of the method used, it seems that the public cannot feel fairness and justice in their hearts. Among them, some universities have unreasonable criteria for judging impoverished students, such as the inability of impoverished students to afford electronic products such as mobile phones, tablets, computers, etc. This practice greatly weakens the autonomous learning ability of impoverished students. Some universities also have high evaluation standards for impoverished students, and many truly impoverished students do not receive necessary assistance. Some universities have turned the determination of impoverished students into a competition between students, effectively damaging the privacy and self-esteem of impoverished students. Therefore, the determination of impoverished students is currently a problem that universities are eager to solve. To ensure the fairness and impartiality of the funding methods for impoverished students, universities can take lagging measures in terms of the teachers, teaching content, and methods being assisted, while also ensuring that the privacy and self-esteem of impoverished students are not harmed. There is no specialized teaching staff in universities, and teachers from similar

majors are generally responsible for teaching the basic theory courses of entrepreneurship. In case of insufficient resources, counselors and administrative personnel will also provide part-time teaching.

#### 3. CONCLUSION

The funding and education of vocational college students is not only a daily student work, but also a work that urgently needs innovation and breakthroughs. It has been proven that the traditional and simple "emergency rescue" approach cannot meet the actual needs of education funding. Against the backdrop of rapid socioeconomic development and people's pursuit of a better life, ideological and mental health education for vocational college students should complement and integrate with economic support, forming a unique connotation and form of support education in the new era. Therefore, it is necessary to adopt more humanized and more in line with the characteristics of students in the new era, and gather resources from all sectors of society to support students. the relevant paths and measures need to be further summarized and summarized in future vocational education grants and educational practices.

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## Exploration and Practice of the Construction Path of National High Level Professional Groups- Taking Zibo Vocational College as an Example

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Abstract: "Professional groups" are the policy guidelines clearly proposed in the "National Vocational Education Reform Implementation Plan". Vocational colleges must be based on practical development, deeply integrate teaching objectives with industrial development needs, and reasonably plan high-level professional groups to promote the sustainable development of vocational colleges. the Electrical Automation Technology Professional Group of Zibo Vocational College implements a dynamic development mechanism for high-level professional groups, proposes a grouping logic of two cores, two foundations, and one chain link, and regularly schedules tasks. Multiple measures are taken to promote the construction of highgroups. Explore level professional effective construction paths for high-level professional groups in vocational colleges.

Keywords: Professional group, "Double High Plan", Group logic, Construction path.

#### 1. INTRODUCTION

The National Vocational Education Reform Implementation Plan (hereinafter referred to as the "Implementation Plan") issued in 2019 clearly states that "vocational education and general education are two different types of education, with equal importance. the Implementation Plan proposes the implementation of the Chinese characteristic high-level higher vocational schools and professional construction plan (referred to as the "Double High Plan"), which points out the direction for the future development of vocational education [1]. the high-level professional group is the key to vocational education assisting national innovation, supporting industrial transformation and upgrading, and serving the transformation of economic development mode, and is the core of the "Double High Plan".

Since the implementation of the Double High Plan, professional groups have become the main focus of school development. From professional construction to professional group development, it is not only an objective demand for corresponding industry development, but also a necessary path for vocational colleges to gather educational resources and create professional brands. The high-level professional cluster is based on the sharing of vocational teaching resources, integrating education and teaching with the development needs of regional industries and industries. By creating disciplinary advantages with strong professional core and cohesion, the high-level professional cluster is combined to improve the teaching level and quality of vocational colleges. Therefore, how to build a highlevel professional cluster in vocational colleges is not only related to the high-level development of vocational colleges, It is more related to the improvement of the national vocational education system. This article takes Zibo Vocational College as an example to analyze the construction path of high-level professional groups.

2. THE CONNOTATION AND ESSENCE OF THE CONSTRUCTION OF HIGH LEVEL GROUPS PROFESSIONAL IN HIGHER VOCATIONAL COLLEGES UNDER THE BACKGROUND OF THE "DOUBLE HIGH PLAN" The professional group consists of majors with strong educational capabilities and high employment rates as the core majors, supplemented by majors with similar technical fields. Vocational colleges should prioritize occupational job groups or industries, while also considering the principle of disciplinary classification to classify vocational majors. In 2006, the Ministry of Education issued the "Opinions on Implementing the National Demonstration Higher Vocational College Construction Plan to Accelerate the Reform and Development of Higher Vocational Education", which first described the professional group in national documents [2]. With the development of the economy and society, the country has put forward new requirements for the high-quality development of vocational education. In order to fully realize the effective integration of professional group resources, the advantages of professional group construction, and form distinct regional development characteristics, the country has introduced the "Double High Plan", which has made the construction of professional groups unprecedented in terms of policies. the construction of high-level professional groups has provided clear regulations in many aspects such as school enterprise cooperation, teacher capital team construction, teaching methods and textbook reform, curriculum construction, etc. the construction of high-level professional groups in vocational colleges revolves around the core majors to form a professional collection, share various teaching resources, and mainly meet the direct needs of important industries in the region. Therefore, through the construction of professional groups, the professional curriculum of vocational colleges can be more in line with practical needs, highlight teaching achievements, and ensure the stability and sustainability of the development of professional groups [3]. It is also the main trend of modern teaching reform in vocational colleges.

3. EXPLORING THE PATH OF HIGH LEVEL PROFESSIONAL CONSTRUCTION IN HIGHER VOCATIONAL COLLEGES

3.1 GROUP LOGIC WITH TWO CORES, TWO FOUNDATIONS, AND ONE HAIN LINK

The Electrical Automation Technology Professional Group of Zibo Vocational College is based on production control technology as the core, focusing on the regional high-end medical and pharmaceutical equipment industry, corresponding to the integration, application, and service guarantee of intelligent manufacturing equipment such as product/mechatronics integration/tooling design, process planning and simulation, production control and execution, component production, monitoring and analysis, assembly and debugging, product sales, aftersales/technical support, etc, For the technical chain of intelligent control and system integration, intelligent production line operation and maintenance, complex machining and typical machine tool assembly and maintenance, digital design and manufacturing process, industrial robot operation and cooperation, etc., we will connect with positions such as tooling design, precision component manufacturing, control system integration, product assembly, technical support and after-sales service, sales experts, etc., and establish industry education integration, school enterprise cooperation, dynamic adjustment Collaborative development of electrical automation technology professional group [4]. 3.2 IMPLEMENT A DYNAMIC DEVELOPMENT MECHANISM FOR HIGH-LEVEIL PROFESSIONAL GROUPS

The education and teaching work in vocational colleges needs to match the socio-economic development situation to ensure that the talents cultivated are in line with social development. Therefore, in the construction of professional groups in vocational colleges, dynamic development mechanisms should be implemented. Due to the development of regional industries and market employment conditions, the professional structure and construction direction should be continuously adjusted and optimized. the Electrical Automation Technology Professional Group of Zibo Vocational College has innovated in the dynamic development mechanism of the professional group in nine aspects, including talent cultivation mode, course teaching resource construction, textbook and teaching method reform, teacher teaching innovation team, practical teaching base, technical skills platform, social service, international exchange and

cooperation, and sustainable development guarantee mechanism [5].

In terms of talent cultivation mode, we focus on the core job group of the equipment manufacturing industry chain, highlight curriculum ideological and political education and labor education, and innovate the talent cultivation mode of "diversified collaboration, threedimensional advancement. and segmented improvement". Reconstruct the course logic and build a result oriented "platform+module+project" course system; Connect with the pilot program of 1+X certificates, implement the integration of job courses, competition certificates, and innovate the "four level ability progressive" practical teaching system; Building a "five in one" innovation and entrepreneurship education system based on practical education platforms, practical training, courses, classrooms, with competitions, and achievement incubation as the content; Implement PDCA quality management and establish a talent cultivation quality management and assessment evaluation system.

In terms of curriculum teaching resource construction, a guiding committee for curriculum teaching resource construction will be established to improve resource development, resource construction assessment and incentive mechanisms, and achieve integrated management of curriculum resources through "planning. construction, management, application, and reward". Innovate and reform conventional teaching resources with the "on-the-job course competition certification" as the starting point; By utilizing virtual simulation technology, create experiential virtual training teaching resources to solve the "three highs and three difficulties"; Relying on the intelligent manufacturing cloud service platform, breaking the time and space limitations of traditional classrooms, and achieving a new form of full time and space learning. Create a resource system that can enhance students' professional skills and achieve autonomous and personalized learning services.

In terms of textbook and teaching method reform, adhering to the student-centered concept, starting from the three dimensions of teacher teaching, student learning, and teaching culture, relying on intelligent factories and school enterprise cooperation bases, incorporating real work tasks into project-based teaching, constructing workplace education scenarios, and carrying out modular teaching reform through team collaboration. Promote the normalized application of action oriented teaching, project-based teaching, situational teaching, and blended teaching, reach a consensus between teachers and students on teaching and learning, integrate professional literacy and learning ability throughout the entire process of talent cultivation, enhance students' sustainable development ability, and promote classroom revolution. Teaching is rooted deeper and more solidly, learning is comprehended more thoroughly and better, and creating a good classroom for the new era.

In terms of innovative teaching teams for teachers, we will establish a trinity team building mechanism that

includes the construction of a teacher development and training system, a new model of team work, and an evaluation and incentive system. Implement the "dual mentor system for teacher training", relying on enterprise industry professors, craftsman masters, and professional group professors to provide precise guidance to teachers in a "two to one" manner, achieving a "five level" training from new teachers to leading figures, and strengthening the four dimensions of "teaching ability, scientific research and technical service ability, student education management ability, and practical ability" training; Establish a new team work model for modular teaching groups and division of labor collaborative project groups; Develop detailed implementation rules for performance assessment and establish a differentiated assessment and evaluation system.

In terms of practical teaching bases, improve the operation and management mechanism of both internal and external training bases. Connect with the national intelligent manufacturing standard system and continue to build intelligent factories; Carry out the construction of high-level regional school enterprise cooperation bases, carry out talent cultivation, technical services, and innovation and entrepreneurship; Jointly establish an intelligent manufacturing campus city integration platform and a two bedroom two base, and complete the construction of a national level (simulation) internship and training base; Establish an organizational structure for the management of training bases and improve the management system for practical teaching; Design a professional group training base information management plan, layout the construction of the training base information management system, and establish a performance evaluation system for enterprise project development.

In terms of technical skills platform, establish and improve the integrated operation mechanism of industry education integration. Implement the goal of cultivating high-quality technical and skilled talents, jointly build an equipment manufacturing characteristic industry college with schools and enterprises, and establish a reform experimental class; Strengthen cooperation with leading enterprises, use equipment intelligent manufacturing technology research as the carrier, and jointly build a municipal level technology research and development center; Rely on the professional group council, give play to the leading role of Mount Taishan scholars and other experts to carry out product research and development, technical services, and Qilu craftsman talent training; Committed to the inheritance of skills, technological innovation, and talent cultivation, building a master craftsman studio; Relying on the provincial-level technology and skill inheritance and innovation platform, we will carry out technology and skill inheritance and innovation in the field of intelligent manufacturing [6].

In terms of social services, connect with the regional equipment manufacturing industry, establish a "dual subject" education management mechanism, and

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cultivate urgently needed talents in the industry; Integrate the advantageous resources of the professional establish an intelligent manufacturing group, characteristic training college, and carry out technical skill training for various personnel; Relying on the professional group information based teaching resource platform, implementing specialized skill training for industry scarce talents; Cultivate national level vocational colleges to train renowned teachers and teams, develop training resource packages, and build a training resource library; Collaborate with companies such as Siemens and Huazhong CNC to host industry competitions for intelligent manufacturing application technology skills; Expand assistance channels, serve vocational education targeted poverty alleviation, and form a long-term mechanism for targeted assistance.

In terms of international exchange and cooperation, we will promote the "going out" approach in a threedimensional manner and achieve the "inviting in" approach in multiple dimensions. Under the benign operation mechanism of international exchange and cooperation, we will manage the Sino German Intelligent Manufacturing College well, form a localized talent training program and curriculum standards, establish an AHK vocational qualification certificate certification center, complete AHK student registration, and form a "localized" and "dual system" vocational program; Introduce the UK National Academic Degrees Evaluation and Accreditation System and carry out international evaluation and certification of electrical automation technology majors; Closely connect with Rhinocost and Tengkai Mining, and establish overseas educational institutions such as the Sino German Institute of Intelligent Manufacturing Technology and the Africa Branch of Zibo Vocational College.

In terms of sustainable development guarantee mechanism, we will improve the governance and operation mechanism of "building institutions with the masses"[7]. Establish a professional group council with the participation of government, enterprises, and schools, and the internal quality assurance system has become autonomous, normalized, and dynamic in operation; A dual oriented professional group adjustment and evaluation model has been preliminarily established to match the degree of industrial development and support the achievement of student development, and a dynamic adjustment mechanism for professional groups to adapt to industrial needs has been put into trial operation; Complete the system of co construction and sharing of teaching resources among various majors within the group, and orderly promote platform development; Improve the "target chain" and "standard chain" of talent cultivation quality, optimize the quality standards for professional group development; Implement process monitoring, assign responsibility to individuals, and ensure the orderly progress of each project.

3.3 REGULAR SCHEDULING, TASKS ON THE WALL, AND MULTIPLE MEASURES TO

### PROMOTE THE CONSTRUCTION OF HIGH-LEVEL PROFESSIONAL GROUPS

In order to promote the standardized and orderly implementation of various construction tasks for highlevel professional groups in electrical automation technology, and ensure the timely and high-quality completion of professional group construction tasks, the Intelligent Manufacturing College has taken measures such as improving institutions, standardized systems, wall chart operations, table comparison promotion, supervision and notification, and solidly promoted the implementation of professional group construction tasks [8].

Break down tasks into monthly tasks, assign responsibilities to individuals, and publicize progress on the wall; the project office releases monthly progress reports on various tasks and conducts supervisory briefings. Regularly hold high-level professional group construction meetings and listen to special reports from project team leaders; the weekly work meeting will include a special report on the construction of professional groups, and the project team leaders and relevant responsible persons will report on the weekly work progress; For key tasks, difficult tasks, and urgent tasks, establish specialized teams to leverage the collective wisdom of team members and solve special problems.

#### 4. CONCLUSION

With the vigorous development of various industries, the demand standards for talents in society are constantly improving. As a transportation base for applied talents, vocational colleges are undertaking a crucial task of talent cultivation in the new era. Building a high-level professional group is a further exploration of teaching reform, which can promote the internalization of teaching in vocational colleges, greatly improve the quality of teaching, and make the talents they cultivate more in line with the needs of industrial development and social positions. It is also an important measure for vocational colleges to achieve sustainable development and maintain the quality of professional teaching. Therefore, vocational colleges should continuously delve into the effective path of professional group construction based on reality, Fully leverage the important role of vocational education in promoting economic and social development.

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## Research on the Development Status and Countermeasures of Higher Vocational Colleges under the "1+X" Certificate System

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Abstract: the "1+X" certificate system is a new type of learning method developed in higher vocational colleges. It uses the concept of documentary evidence integration, and on the basis of coordinating "1" and "X", with skills as the main line of curriculum construction, combining the foundation of professional construction and current industrial development and talent needs, to make students more adapt to social needs. Based on the analysis of the significance and current situation of the implementation of the "1+X" certificate system in higher vocational colleges, some suggestions are given for the implementation strategy of the "1+X" certificate system in colleges and universities.

Keywords: "1+X" certificate system, Higher vocational colleges, School enterprise cooperation.

### 1. OVERVIEW OF THE "1+X" CERTIFICATE SYSTEM

In 2019, the "National Vocational Education Reform Implementation Plan" issued by the State Council clearly stated that vocational colleges and applicationoriented undergraduate universities are required to launch a pilot reform of grade certificates combining academic qualifications with vocational skills, which is known as the "1+X" certificate system. [1]

In terms of content, the "1+X" certificate system refers to a combination of academic credentials and vocational skill level certificates, where "1" refers to academic credentials and "X" refers to several vocational skill level certificates. School education comprehensively implements the Party's educational policy and the fundamental task of cultivating morality and cultivating people. It is the main channel for cultivating highquality workers and skilled personnel with comprehensive development of morality, intelligence, physique, beauty, and labor. Academic credentials comprehensively reflect the quality of talent cultivation in school education, and play an indispensable fundamental role in the development of national human resources. the vocational skill level certificate is a certificate of the vocational skill level of graduates and members of society, reflecting the comprehensive abilities required for professional activities and personal career development. [2]

2. THE SIGNIFICANCE OF IMPLEMENTING THE "1+X" CERTIFICATE SYSTEM

2.1 AN IMPORTANT MEASURE TO IMPROVE THE QUALITY OF TALENT CULTIVATION

To better serve the construction of a modern economic system and achieve higher quality and fuller employment needs is a new mission entrusted to vocational education in the new era. With the continuous acceleration of the new round of technological revolution and industrial transformation and upgrading, there are still certain gaps in the adaptability, consistency, and foresight of vocational education in talent cultivation. [3] the school accelerates the structural reform of the talent supply side by guiding vocational skill level certificates built through a socialized mechanism, which is conducive to enhancing the consistency between talent cultivation and industrial demand, cultivating complex technical and skilled talents, and expanding employment and entrepreneurship skills.

2.2 AN IMPORTANT WAY TO DEEPEN THE REFORM OF TALENT TRAINING AND EVALUATION MODELS

Through the pilot implementation of the 1+X certificate system, we will mobilize the enthusiasm of social forces to participate in vocational education, lead innovative training and evaluation models, deepen the reform of teachers, textbooks, and teaching methods, and guide colleges and universities to combine education and training, both short and long, and internal and external. We will further implement the legal responsibility of attaching equal importance to both academic education and vocational training, and carry out high-quality social training. [4]

#### 2.3 EXPLORE THE FUNDAMENTAL PROJECT OF BUILDING A NATIONAL QUALIFICATION FRAMEWORK

The vocational skill level certificate is a certificate of vocational skill level and also a recognition of learning achievements. In combination with the implementation of the 1+X certificate system pilot project, actively promote the exploration of a national "credit bank" for vocational education, link the system design with the construction of a national qualification framework, and smooth the growth path for technical and skilled talents. "1+X" 3. DEVELOPMENT STATUS OF CERTIFICATE HIGHER SYSTEM IN

VOCATIONAL COLLEGES

3.1 THE FOUNDATION OF "THREE RELIGIONS" IS WEAK

Teachers in higher vocational colleges tend to be younger, and there are widespread problems such as the lack of vocational education theories. There are few national planning textbooks jointly developed by both schools and enterprises in higher vocational colleges, and there is a lack of supporting information resources such as micro courses, Mu Ke, and professional teaching resource libraries. In terms of teaching methods, most vocational colleges still use the traditional method of teaching and listening to students, resulting in monotonous and dull classrooms and low interest in learning.

### 3.2 THE OVERALL FRAMEWORK AND RELATED SUPPORTING SYSTEMS ARE MISSING

There is no clear framework for who will lead the "1+X" certificate system pilot, how to build it, what standards, how to evaluate certificates, and how to convert credits. Inconsistency in the identification bodies of vocational qualification certificates greatly reduces the recognition of the certificates.

3.3 INDUSTRY AND ENTERPRISES LACK ENTHUSIASM FOR PARTICIPATION

Currently, higher vocational colleges are actively promoting the integration of industry and education, school-enterprise cooperation, and deepening cooperation with industries and enterprises, but at the same time, many enterprises are not actively participating in school-enterprise cooperation, lacking the endogenous motivation for deep participation and active cooperation.

#### 3.4 THE CURRICULUM TEACHING SYSTEM IS DISCONNECTED FROM THE VOCATIONAL SKILL LEVEL STANDARDS

At present, higher vocational colleges are disconnected from the standards adopted for vocational skill level certificates in terms of curriculum settings and teaching content. There is a significant gap between the established talent cultivation goals and vocational education standards, the curriculum system structure and skill standards are inconsistent, teaching content cannot be effectively integrated into vocational skill standards, and teaching methods are not suitable for vocational ability cultivation.

4 **COUNTERMEASURES** FOR THE DEVELOPMENT "1+X" CERTIFICATE OF SYSTEM IN HIGHER VOCATIONAL COLLEGES STRENGTHEN COOPERATION 4.1 THE MECHANISM BETWEEN SCHOOLS AND **ENTERPRISES** 

In order to thoroughly implement the "1+X" certificate system, higher vocational colleges can strengthen school-enterprise cooperation, actively reference national vocational standards to improve the preparation of professional textbooks, create student training bases on campus, and introduce advanced enterprise training resources, training systems, and teacher teams. At the same time, higher vocational colleges can also connect their talent cultivation models with enterprises, establish a teaching quality evaluation system that integrates society, schools, and enterprises, enable enterprises to participate in the formulation of school talent construction plans, carry out regular inspection of teaching quality, internship, and other activities, and improve the specific construction of the "1+X" certificate system.

### 4.2 BUILD A CERTIFICATE SYSTEM AND FORM A SERIES OF STANDARDS

A series of standards should be built on the basis of the system, based on stability and continuous promotion. At the same time, certificate standards should be implemented for each item in accordance with the professional and targeted "1+X" certificate system, starting from three aspects of knowledge, skills, and abilities, and the level of competency standards should be defined. At the same time, it is also necessary to build a database of relevant test questions and skills that are conducive to implementation and include assessment and evaluation, as well as corresponding standardized resources. the "1+X" certificate system is not simply a superposition of certificates, but an effective coordination based on two types of certificates. Therefore, targeted improvements based on content and structure can be made to build a relatively complete certificate system, which can ensure the comprehensive effect of talent cultivation in vocational education. For majors, with the help of system construction, improvement should be based on the academic certificate system, and the two types of certificates should be integrated into the curriculum the project and practice are implemented together at three specific levels, and the ability is gradually upgraded throughout the entire teaching and learning process. At the same time, it is also necessary to integrate and optimize systems and resources to better meet students' diverse career goals and diverse growth needs, so as to truly achieve a meaningful upgrade. In addition, in terms of the effective implementation of the certificate system, good evaluation standards, resources, and evaluation mechanisms should be established to ensure the highlevel implementation of the "1+X" certificate system, so as to achieve the cultivation of students' comprehensive quality and hands-on operation ability.

#### 4.3 BUILDING A "DOUBLE QUALIFIED" TEACHER TEAM

Teachers are the dominant role in teaching, and in the context of the implementation of the "1+X" certificate system in the teaching program, efforts must be made to strengthen the construction of the teaching staff. Schools should organize teachers to use their holidays and daily spare time to conduct training and learning on relevant skills, and the work of obtaining certificates should also be open to teachers, allowing more teachers to have the opportunity to experience the field operation of relevant courses in enterprises, deepen their understanding of curriculum standards and content, and better understand what students need to learn. In addition, it is necessary to accelerate the construction of a double qualified teacher team, establish a new teaching concept that emphasizes both theory and practice, break away from the shackles of traditional teaching structures, from a single system of indoctrination and learning to the discovery of students' flash points, and form positive interaction in the classroom. Higher vocational colleges should cultivate a group of their own teachers with high content vocational skills certificates as soon as possible. Teachers should deepen their understanding of the cultivation concept of students under the new certification model, systematically adjust their teaching methods, change their evaluation criteria for students, and learn from each other in the teaching modes of practical and theoretical courses through collaborative discussions, seminars, and other forms. Under the mode of school-enterprise integration, senior technicians are sent by the enterprise or hired by the university through a cooperative mechanism to enter the campus and guide students in on-site operation courses at the training base, so as to better understand the problem solving process and solutions, deepen their understanding of the work, and improve their learning interests and vocational skills.

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## Research on the Operation of Innovation Training Room Based on Community

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Abstract: Innovation laboratory is an important place to cultivate and improve students' practical innovation ability. the utilization and management of the laboratory plays an important role in the process of cultivating innovation ability. In practice, affected by the quality of teachers and students, the management of innovation laboratory faces great challenges. In this paper, the importance of laboratory management innovation in higher vocational colleges is demonstrated, combined with the current problems of laboratory management in higher vocational colleges, and then elaborated the innovative ideas of laboratory management in higher vocational colleges, in order to improve the laboratory management in higher vocational colleges, in the future to cultivate more high-quality innovative talents for the society.

Key words: Training room, Integrated management, Higher vocational colleges.

#### 1. INTRODUCTION

On May 7, 2012, the Ministry of Education, PRC and the Ministry of Finance, PRC jointly held a working meeting to officially launch and implement the Plan for Improving Innovation Capability of Institutions of Higher Learning, also known as the 2011 Plan. the core task of the project is to improve the innovation ability of talents, disciplines and scientific research. By constructing four types of collaborative innovation modes facing the scientific frontier, cultural inheritance and innovation, industry and major needs of regional development, the project deepens the reform of the mechanism and system of higher vocational colleges, transforms the innovation methods of higher vocational colleges, and establishes new advantages that can impact the world-class. Traditional laboratory management methods and thinking have long been unable to match the current development of the context. In the process of data, innovation is king. Innovation is not only an important factor for national prosperity, but also the foundation for the survival and development of higher vocational college laboratories. Throughout the ages, many discoveries have been made in laboratories, so innovation is the defining attribute of laboratories. Only by adhering to innovation can we strongly drive the laboratory management of higher vocational colleges forward in the new era. As an important part of higher vocational colleges, laboratory is an important support for experimental teaching and subject construction in higher vocational colleges, as well as a cradle for cultivating innovative talents. the reform of laboratory management is directly related to the

teaching quality of higher vocational colleges and the training level of innovative talents.

Innovation practice laboratory is a centralized innovation place open to all engineering majors in the school. It is mostly in the form of innovation practice base, maker space, innovation studio, etc., providing students with tools and equipment needed for electronic innovation production. Due to the strong public service attribute, high degree of openness and wide coverage of the laboratory, the factors involved in safety management are relatively complex. If the safety work only relies on the sense of responsibility and experience, it is difficult to avoid mistakes caused by human negligence. Therefore, the management of innovative training room is a very important concern at present.

2. THE NECESSITY OF INNOVATION OF LABORATORY MANAGEMENT IN HIGHER VOCATIONAL COLLEGES

2.1 INNOVATIVE CONCEPT IS THE REQUIREMENT OF SOCIAL DEVELOPMENT

The development of knowledge globalization is inevitable. In order to adapt to the tide of social development in the new era, it is necessary to work out a new concept and system of laboratory management in higher vocational colleges. Innovation is the inevitable trend of the development of the Times. With the implementation of reform and opening up in our country, the progress of modernization is a thousand miles a day, especially when the strategy of developing the country through science and education is proposed and implemented, the rapid development of the market economy, all fields of industry by leaps and bounds, has caused a great gap in the social market of talent supply, now faced with rapid rise in demand for talent. Institutions of higher learning shoulder an increasing burden of education, and in order to fill the social demand, higher education must cultivate a large number of innovative attributes of high-quality talents more in line with the current era on the basis of the original education. And cope with the current prosperity of rapid economic and technological development [1]. In the face of these pressures and current situation, it is urgent for colleges and universities to better fit the vision and demand of the healthy development of society and cultivate innovative high-quality talents. Then, the of laboratories should management also he comprehensively optimized and upgraded to better assist students' study and life. In the 21st century, the people-oriented concept has become increasingly prominent, and information has become an open resource in the sharing economy. Based on this, the

dissemination and wide use of information have reached a new high year after year, and the barriers that once restricted the development of higher vocational colleges have been completely broken. Moreover, the comprehensive literacy of experimental technology and personnel is getting higher and higher, so the laboratory management must be replanned, and the teaching and management should be carried out by technicians with real innovative consciousness and ability. Only by adhering to the concept of innovation, adhering to the concept of people-oriented and keeping pace with the Times, can laboratory management occupy a place in the current of social development and better fit and use the educational objectives and requirements of talent training in the new era.

#### 2.2 INNOVATION LABORATORY MANAGEMENT IS AN INTEGRAL PART OF IMPROVING THE TEACHING EFFECT OF HIGHER VOCATIONAL COLLEGES

How to build characteristic colleges needs to integrate and plan the existing resources so as to redivide and allocate them. In order to maintain the competitive advantage, it is necessary to improve the professional systematization level of management of higher vocational colleges. Among them, the most practical and effective way is to innovate in management work, build a high-quality and professional management team, and establish supervision and evaluation departments, so as to improve the service quality and management level of higher vocational colleges [2]. In terms of the management of innovation work, it is necessary to form a good and continuous innovation consciousness and mechanism, so as to maintain the competitiveness at all times, which requires the management staff of higher vocational colleges and other personnel with innovation consciousness and ability, and set innovation as the core content of the management of higher vocational colleges. the innovation management of higher vocational colleges not only has positive significance to promote the full speed development of higher vocational colleges, but also expands the single innovation to the comprehensive innovation.

#### 2.3 INNOVATIVE MANAGEMENT GUIDES THE CONTINUOUS CONSTRUCTION OF THE LABORATORY

Laboratory management in higher vocational colleges is not only the vanguard force of innovation in higher vocational colleges, but also the experimental field of innovation ability construction, and also the main link of national innovation system. For the country and nation, innovation is the inexhaustible driving force for development, while for the laboratory of higher vocational colleges, innovation is the eternal law of operation and construction. Only innovation is the only consistent new concept in laboratory building and laboratory management. It is clear that the laboratory of higher vocational colleges is the main place for cultivating talents and improving students' comprehensive ability. Is really able to make the experimental teaching and management of the source of mutual coordination, but also to promote the laboratory management work harmonious and healthy development of essential factors. Innovation is not just a slogan, but the sublimation and improvement of management mode and system. Only by constantly innovating more in line with its growth consciousness according to the pace of social development, is the fundamental way to lead the laboratory and cultivate talent system. To create a good working atmosphere and environment for teachers and students working in the laboratory is to truly solve all the negative problems for them, so as to enhance their creativity and subjective initiative based on experiments.

3. INNOVATE THE REFORM WAYS OF LABORATORY MANAGEMENT SYSTEM

### 3.1 MANAGEMENT CONCEPT SHOULD BE UPDATED

Innovation management is an ideological revolution, it guides the management mode and practice activities of the whole system of laboratory operation, innovative management ideas in the laboratory management system reform has a guiding, playing a lasting role. the concept of laboratory innovation management should not only abandon the traditional laboratory management system, but also pay more attention to the training of management talents, build a high-quality management team, establish and improve the laboratory management system, and actively implement the new management mode of the laboratory in higher vocational colleges. the innovation of laboratory management ideas in higher vocational colleges is mainly manifested in the ideas of managers, methods and systems of management. At the same time, understanding the needs of talent training, actively solving the shortcomings and shortcomings of laboratory management, targeted solutions to existing problems, in order to improve the laboratory management work to play a positive role. Only by combining advanced management ideas with advanced technologies can we create a first-class academic research environment and cultivate innovative talents. 3.2 LABORATORY MANAGEMENT SYSTEM

### SHOULD BE FOLLOWED UP

In order to build a good laboratory working environment, adapt to the development direction of our education cause, and achieve the purpose of "standard, scientific, efficient, safe", we must timely and comprehensively update the laboratory management system. Formulate a reasonable laboratory management system, according to the relevant national laboratory management standards, combined with the actual operation of the laboratory, including the use of laboratory instruments and equipment, maintenance, procurement, custody, deployment, laboratory supplies daily declaration, use, safety and fire prevention work should be responsible for management. Divide the responsibilities of laboratory personnel and formulate regulations on the management of laboratory paid services. Laboratory management work should be microscopical, verifiable, legal, clear division of responsibilities, not only can improve work efficiency, but also can avoid the

phenomenon of blaming each other for problems. At the same time, the latest management system will be updated on the college website, which is convenient for students to consult and learn the new regulations anytime and anywhere. the laboratory is an important place for practical teaching and scientific research. Once the system is determined and implemented, all personnel must strictly abide by the management rules and regulations of the laboratory and strictly implement standardized management.

### 3.3 STANDARDIZE EQUIPMENT AND CONSUMABLES MANAGEMENT

The operation of oscilloscope and other instruments has always been the focus of electronic experiment teaching courses. By using relevant instruments in experiments, students can not only grasp theoretical knowledge and understand experimental schemes, but also improve experimental skills, find and solve problems in operation, which plays a good teaching effect for cultivating students' ability to be independent. Therefore, it is necessary to formulate instrument management standards, standardize instrument use methods, and improve the efficiency of instrument use. Carry out unified planning, management and re-integration of existing laboratory instruments and equipment. the instruments in the scientific research laboratory are systematically planned and placed according to their functions, and the instruments in the teaching laboratory can meet the functional placement of experimental teaching according to their number. In order to innovate the management mode of the laboratory and improve the management system of the laboratory, we should not only develop a standard system, but also pay attention to the maintenance and management of laboratory instruments and equipment. This can effectively improve the efficiency of the use of houses and equipment, avoid repeated purchase of instruments and low efficiency of the use of instruments, optimize the allocation of resources, and avoid the waste of limited funds. Make statistics on the types, models, quantities and working conditions of existing instruments and equipment in time, be able to skillfully operate the instruments under management, eliminate routine faults, and carry out effective daily maintenance. Subject leaders and scientific research team leaders make instrument purchasing plans according to the future teaching and scientific research directions of the subject, which shall be reviewed by the school leaders and the person in charge of the experimental center for unified procurement. To realize instrument resource sharing between colleges and laboratories.

#### 3.4 PROMOTE THE DEVELOPMENT OF INNOVATION LABORATORY WITH REASONABLE SYSTEM

Institutional innovation is conducive to the sustainable development of the innovation laboratory, as well as the reasonable allocation and optimization of all the resources of the laboratory, so as to give full play to its maximum effectiveness in the experiment. Practical development and laboratory management want to do complementary management system, to take the essence of the dross on the original basis, to achieve continuous innovation, will be unreasonable and unfair management system completely abandoned, in order to establish a set of scientific and good management system, and to supervise the smooth implementation of the system, in order to prevent the symptoms of the cure. There may be detailed incentive mechanism in the new mechanism, such as economic encouragement, spiritual encouragement, cautious encouragement, etc. In addition, laboratory personnel all have their own characteristics and advantages, but they also naturally have shortcomings and disadvantages. Therefore, corresponding regular training can be developed within the system. According to the training content needed by each person, through the improvement of experimental skills, the title and skills, innovative consciousness, divergent thinking of experimental technical personnel can be improved to a greater extent.

#### 4. CONCLUSIONS

Innovation laboratory is an important way to cultivate innovative talents, is a systematic project, we need to continue to improve the laboratory management system, establish high-level experimental teachers, constantly solve a variety of problems, and constantly put forward new requirements, timely change the concept of education, update the management system, to build higher vocational colleges to cultivate innovative talents to lay a solid foundation. the cultivation of innovative talents needs to rely on the innovation laboratory and the college student innovation team (our school relies on the electrical automation association). After years of exploration and practice combined with the school's own conditions and characteristics, the establishment of a set of suitable for the actual situation and demand of electrical major talent training mode and methods, make up for the deficiency of theoretical courses teaching, develop new teaching methods, according to the learning interests of different students, targeted training. Through the practice and application of our school in recent years, good results have been achieved, and the students are warmly welcomed by enterprises.

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## Research on the integration of Chinese excellent traditional culture into the Practice teaching of Aesthetic Education Curriculum under the strategy of Cultural Power

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Abstract: The strategy of cultural power is the basic strategy of building a socialist cultural power. Aesthetic education is an important starting point to implement the strategy of cultural power. the fine traditional Chinese culture has been constantly renewed, showing the development of the Chinese nation for more than 5,000 years. It contains rich resources for aesthetic education, and its inherent value has become a magic weapon for the development of contemporary China. the curriculum of aesthetic education is an important way to implement aesthetic education. Taking the excellent traditional Chinese culture as education resources, colleges and universities should combine the curriculum construction of aesthetic education with the excellent traditional Chinese culture, and actively explore effective ways to integrate the excellent traditional Chinese culture into the curriculum teaching of aesthetic education in colleges and universities.

Key words: Cultural power, Aesthetic education course, College students' humanistic quality, Cultural confidence.

#### 1. INTRODUCTION

The strategy of making China strong through culture is an important part of building a modern socialist country in an all-round way and realizing the Chinese Dream of great national renewal. the report of the 20th National Congress of the Communist Party of China put forward that "to build a modern socialist country in an all-round way, we must adhere to the socialist path of cultural development with Chinese characteristics and enhance our cultural confidence, " "Only when rooted in the rich historical and cultural soil of the country and the nation can the tree of Marxist truth take root and grow thick and strong, " "promote cultural confidence and selfimprovement, and create new glory in socialist culture. "[1] the strategy of making the country strong in culture is the basic strategy of building the country strong in socialist culture, which is of great significance for promoting the all-round construction of a modern socialist country. Implementing the strategy of cultural power is the call of the current era. As an important base for national personnel training and scientific and technological innovation, colleges and universities should actively assume the responsibility of inheriting and spreading the excellent traditional Chinese culture.

As a university bearing the national development strategy and an important place for the export of knowledge and talents, it shoulders the mission of inheriting and carrying forward the excellent traditional Chinese culture. [2] Colleges and universities play an irreplaceable role in cultivating college students' national spirit and building up their cultural confidence. Colleges and universities should combine ideological and political education with the fine traditional Chinese culture, guide students to feel the broad and profound Chinese culture, enhance the sense of community of the Chinese nation, and draw ideological strength, gather spiritual strength and arouse patriotic enthusiasm in learning, inheriting and carrying forward the fine traditional Chinese culture.

2. THE AESTHETIC EDUCATION CURRICULUM PLAYS AN IRREPLACEABLE ROLE IN IMPLEMENTING THE CONCEPT OF "GRAND AESTHETIC EDUCATION" IN UNIVERSITIES.

The strategy of cultural power is a grand strategy, covering various aspects such as cultural innovation, cultural transmission and cultural sharing, and the curriculum of aesthetic education, as an important part, plays an important role.

The curriculum of aesthetic education is an important way and main carrier to implement aesthetic education. Through aesthetic education courses, students can imperceptibly accept the edification of excellent traditional culture and improve their own cultural accomplishment. Colleges and universities shoulder the sacred mission of cultivating high-quality talents for the country and improving the humanistic quality of college students. Therefore, colleges and universities should shoulder the responsibility of inheriting and carrying forward the excellent traditional culture, carrying forward the Chinese spirit and building a new socialist culture with Chinese characteristics. Aesthetic education course plays an important role in improving the humanistic quality and comprehensive quality of college students. the implementation of aesthetic education courses in colleges and universities can promote students' all-round development and enhance their cultural self-confidence, thus laying a solid foundation for cultivating Chinese spirit and constructing a new socialist culture with Chinese characteristics. [3]

#### 3. COLLEGE AESTHETIC EDUCATION CURRICULUM HAS ITS OWN CHARACTERISTICS.

First of all, the college aesthetic education course is different from other public art courses, has its own particularity. Public art courses mainly teach students various art forms, languages and other knowledge and skills related to aesthetics, so as to improve students' aesthetic ability; the aesthetic education course mainly aims at cultivating students' ability to understand, appreciate and create beauty. Its main goal is to cultivate students' aesthetic ability as the core and help them develop good aesthetic habits. First of all, the curriculum of aesthetic education is a multidisciplinary course with aesthetics as the core, interest as the driving force, practice as the carrier and creation as the purpose. Secondly, the aesthetic education course has the advantages of ideological and political education which cannot be replaced by other public art courses. For example, it can cultivate college students' love for the motherland and the people; It can help college students establish correct outlook on life, values and world outlook; It can train college students to feel life, discover the beauty of life, stimulate and develop creative thinking ability. Finally, aesthetic education course is an important carrier for college students to improve their aesthetic quality and cultivate their innovative spirit and practical ability.

4. THE PRACTICE PATH AND FORM OF AESTHETIC EDUCATION COURSE.

The practice path and form of aesthetic education course. The curriculum of aesthetic education is an important way to implement aesthetic education and also an important measure to implement the strategy of cultural power in universities. Therefore, we must attach great importance to the curriculum construction of aesthetic education.

First of all, we should attach great importance to the construction of aesthetic education curriculum and bring it into the teaching plan. the curriculum system of aesthetic education is the basis of aesthetic education teaching activities. We should fully realize the important role of aesthetic education curriculum in cultivating students' humanistic quality and the particularity of aesthetic education curriculum. We should fully realize the importance to the teaching work of aesthetic education curriculum in improving students' humanistic quality, attach importance to the teaching work of aesthetic education curriculum and the construction of aesthetic education curriculum system, and innovate the training mode of talents from the aspects of curriculum setting, teaching content and teaching methods.

Secondly, we should enrich the content of aesthetic education courses and guide the teaching content to combine with the characteristics of colleges and universities and regional characteristics. On the basis of fully exploiting and making use of its own advantages, schools should set up rich and diverse forms of aesthetic education courses, such as literature appreciation, language art, film and television appreciation and creation, art appreciation, music appreciation, practical etiquette, college Chinese and other courses. We can implement measures such as "Revitalizing Project of Chinese Traditional Festivals" and "Reciting Project of Chinese Classics", and carry out a series of cultural construction activities on campus, such as "campus drama", "Opera into campus" and "honoring excellent traditional Chinese culture", so that students can penetrate and carry forward excellent traditional Chinese culture in practical activities and encourage students to show their achievements. When conditions are met, schools can organize activities to guide excellent national and folk culture, elegant art and intangible culture into the campus, combine classroom education with local characteristic resources, and even build a number of cultural inheritance bases to provide sites for aesthetic education teaching activities.

Third, deeply embed ideological and political elements, strengthen the guidance of values.

Colleges and universities should take moral education as their fundamental task, and promote the education of fine traditional Chinese culture into the classroom and management. Colleges and universities can spread red culture and excellent traditional Chinese culture through different forms in the process of aesthetic education, which is of great significance to strengthen students' value guidance and enhance their cultural confidence. To be specific, literary and artistic works with revolutionary culture as the connotation can be developed; Revolutionary culture education with the theme of "Victory Day of the Anti-Japanese War"; Holding a red theme painting and calligraphy photography competition; We will explore the educational connotation of revolutionary culture, and carry out educational activities with the theme of "Inheriting the Red Gene, Undertaking the task of Rejuvenation". At the same time, ideological and political elements are incorporated into club activities to strengthen students' understanding and recognition of red culture and excellent traditional Chinese culture, so as to form correct values and aesthetics.

Finally, build an online education platform to expand the coverage of excellent traditional Chinese culture.

Traditional offline aesthetic education teaching has formed a relatively complete teaching mode, and has been widely used. Under the background of Internet +, the emergence of offline teaching has not only changed the way students learn, but also greatly developed the professional knowledge and technical operation of teachers. Therefore, aesthetic education teaching should not only adhere to the effective traditional way of offline teaching, but also open up a new path of online teaching methods, and plan to go from "offline" to "cloud". Teachers can use the online teaching platform to publish content related to aesthetic education and art education, guide students to read and understand, consolidate students' in-depth understanding and memory of aesthetic principles, and improve college students' aesthetic appreciation ability.

5. CONCLUSIONS

The realization of the "Chinese Dream" is inseparable from the implementation of cultural power strategy. colleges and universities undertake the dual tasks of cultural inheritance and talent cultivation. Colleges and universities should actively assume the responsibility of inheriting and spreading the excellent traditional Chinese culture, innovate the implementation path of college aesthetic education courses, and give play to the role of college aesthetic education courses in improving the humanistic quality of college students, cultivating their humanistic spirit and strengthening their cultural confidence. Let students feel, understand and inherit traditional culture in the process of participation, let excellent traditional culture take root and sprout in the hearts of college students, and become a spiritual force that can be truly integrated into the blood and bone marrow.

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## Study on Vocational College students' Employment Psychological Crisis and Intervention Measures

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Abstract: Due to the lack of social experience, vocational college students are easy to appear psychological confusion, fear, anxiety, escape and other psychological problems before employment, which is not conducive to their timely seizing the opportunity to successfully find employment Combining the current social employment situation and the psychological problems of vocational students in the process of employment, this paper points out the management and intervention strategies of vocational students' psychological crisis in employment, which can provide reference for helping vocational colleges to carry out employment management and guidance, improve vocational students' confidence in employment, and alleviate psychological problems in employment.

Keywords: Vocational College, Students' Employment, Psychological Crisis.

#### 1. INTRODUCTION

Due to the lack of educational advantages, vocational college students can only choose some basic positions in employment. They have more opportunities to become blue-collar and white-collars by virtue of technical ability, but it is difficult to enter higher-level positions. From the current employment situation of vocational college students, affected by the expansion of undergraduate enrollment and the increase of graduates year by year, vocational college students' employment space has been squeezed, bringing greater pressure to students' employment. In recent years, under the severe employment situation, vocational college students' employment psychological crisis is more serious, vocational colleges must take the management and solution of students' employment psychological crisis as an important normal task. [1]

2. THE CONCRETE MANIFESTATION OF VOCATIONAL COLLEGE STUDENTS' EMPLOYMENT PSYCHLOLGICAL CRISIS

#### 2.1 PSYCHOLOGICAL FEAR OF EMPLOYMENT, NEGATIVE BEHAVIOR TO AVOID EMPLOYMENT

The most prominent performance is the fear of employment this reality, in the vocational students to the last academic year, this psychological fear often suddenly appear. Because, in the last academic year, students will face the final internship examination, generally a few months before graduation students will start to look for a job, time is tight, students suddenly feel the pressure of employment, from the pressure of society, family pressure, school pressure and so on, these pressures together, vocational students will appear a kind of fear, When the fear of not finding a job is very serious, students will have negative avoidance behavior, showing a strong inferiority complex and dare not face the objective fact of internship and employment. Some students will even be addicted to the Internet to paralyze themselves.

Many higher vocational colleges promise to introduce internship units to students and guarantee 100% employment when recruiting students. Many students believe that the school will eventually assign internship units to them, and then they can get employment in internship units. However, although the school can arrange some students internship, but it does not mean that employers will keep all the students, employers will choose to keep the best. So, there is still a lot of competition. Some students lack the active awareness of job hunting. Instead, they will miss the job hunting window when there are most job opportunities, and when they find themselves unemployable, it will be more difficult to find a suitable job. [2-3]

### 2.2 LACK OF PERSONAL OPINION, THERE IS A SERIOUS HERD MENTALITY

Many vocational college students lack personal opinion, self-cognition is not clear, do not understand their own strengths and weaknesses, also do not understand the current social situation, to the employment stage, always observe other students to do what, how to do, is to study, test the establishment unit or entrepreneurship, at that time, what others do on their own. This herd mentality leads to the emergence of "dormitory groups" in higher vocational colleges. [4] For example, all the students in one dormitory decide to "get higher education", or all the students in one dormitory plan to "start a business" and so on. Although students may not all fit into the corresponding model, after all, students can take the initiative to try and take a key step. However, serious herd mentality is closely related to negative employment psychology, which often appears near graduation, the whole dormitory is playing games, not in a hurry to find a job.

### 2.3 TOO EAGER FOR QUICK SUCCESS, LACK OF REASONABLE CAREER PLANNING

Some vocational students realize that the social employment situation is grim, active employment, afraid of not grabbing good employment opportunities, resulting in excessive anxiety, lack of reasonable career planning, eager for quick success and instant benefits thought and behavior. For example, some vocational college graduates believe that their education is not high, the lack of competitive advantage in some high-quality jobs, so they find a new path, specially select some high-paying jobs to apply for, but these jobs are mostly sales positions, and many students' professional knowledge system is not consistent, students' future development may be affected by the professional and post is not consistent. [5-6]

### 2.4 OVERESTIMATE ONESELF, EMPLOYMENT CAN NOT BE DOWN TO EARTH

There are also a small number of higher vocational students who overestimate themselves and fail to recognize the employment situation. They have a strong vanity and comparison psychology. They hope to be better than others in employment and job hunting, so they pick and choose their jobs and turn their nose up at the position and salary suitable for their own work, while the position they want is not up to the threshold. Think oneself is a horse, just lack of bole, so, unconsciously will cause the passage of time, may not be able to find a suitable job after graduation.

3. MANAGEMENGT PRINCIPLES AND REQUIREMENTS OF VOCATIONAL COLLEGE STUDENTS' EMPLOYMENT PSYCHOLOGICAL CRISIS

### 3.1 PAY ATTENTION TO GRADUATES, CARRY OUT EMPLOYMENT PSYCHOLOGY CENSUS

When vocational colleges carry out employment management of fresh graduates, they must realize that the psychological crisis of fresh graduates in higher vocational colleges will hinder and harm their smooth employment. Therefore, the employment management department of higher vocational colleges should really pay attention to the graduates, in the third academic year of higher vocational first semester to carry out the employment psychology census, through the census statistics to understand the students' understanding of employment and job hunting, whether there is a psychological crisis of employment, the severity of the students' psychological crisis, the proportion of students with serious psychological crisis in employment and the existing psychological problems in employment, so as to provide help for intervention to solve the psychological crisis in employment.

#### 3.2 TO ACHIEVE FUNCTIONAL INTEGRATION OF DEPARTMENTS AND IMPLEMENT PSYCHOLOGICAL MANAGEMENT OF EMPLOYMENT

Vocational colleges should adhere to the principle of departmental function integration when carrying out employment psychological crisis management, integrate the functions of the school employment management department, psychological counseling department, academic affairs Office, student office, etc., so that each department can put forward the corresponding student employment crisis management plan, employment management department can make employment psychological crisis management direction guidance and comprehensive planning work. Provide the corresponding analysis report of employment psychological crisis; Psychological counseling department can provide employment psychological counseling for higher vocational college graduates; the academic affairs Office to arrange the corresponding employment psychological guidance courses; Student Affairs Office to design some can solve the students fear of employment psychology activities, play the role of relevant student associations.

#### 3.3 DIVIDE PSYCHOLOGICAL CRISIS INTO CATEGORIES AND FIND THE SOURCE OF PSYCHOLOGICAL CRISIS

When carrying out the psychological crisis management of students in higher vocational colleges, the school should classify the psychological crisis of students, and find the source of the psychological crisis according to the different categories. Through analyzing the reasons for the psychological crisis of students in employment, the effective management plan is put forward. For some social employment situation, it is difficult for the school to intervene, but the school and students can work hard to solve the reasons. Vocational colleges have no corresponding employment education in the first and second academic year of the curriculum, and in the course of teaching, teachers pay attention to explaining professional knowledge, less for students to analyze the professional development situation, until the third academic year, students really feel the pressure of employment, the school did not provide some employment guidance for students, at this time, many students may have appeared employment psychological crisis. Therefore, vocational colleges should take employment psychological crisis management as the focus of employment management, cultivate students' positive and healthy attitude after students enter the school, provide systematic mental health education for students, so that students form flexible employment ideas, independent analysis of the employment situation, and make a scientific and reasonable response.

#### 3.4 COMPREHENSIVELY IMPLEMENTING QUALITY MANAGEMENT AND IMPROVING OUR ABILITY TO WITHSTAND PRESSURE AND SETBACKS

Vocational colleges should fully implement quality education and quality management when carrying out psychological crisis management in employment, and improve students' ability to resist pressure and frustration by integrating frustration education. Vocational college students are bound to encounter a lot of difficulties in job hunting, but let the students realize that these difficulties are temporary, in the difficulties and setbacks in the serious reflection, and their own state and ability to make adjustments, and the improvement of students' comprehensive quality, can imperceptible improve students' confidence, language expression and behavioral quality, Improve the competitiveness of students in the job market, and finally get a satisfactory position in the job search. 4. VOCATIONAL COLLEGE STUDENTS EMPLOYMENT PSYCHOLOGICAL CRISIS INTERVENTION STRATEGY.

DEMAND INTERPRET FOR 4.1 THE EMPLOYMENT SITUATION AND HOLD A MOBILIZATION MEETING FOR EMPLOYMENT The employment situation of each major will change every year. the main reason for the students' employment psychological crisis is the lack of social experience, the lack of understanding of the employment situation of the major, and the uncertainty of the job they are capable of. Therefore, when vocational colleges intervene in students' psychological crisis in employment, they should start from the root of psychological crisis. Teachers of various the professional disciplines should interpret the employment situation and job demand for students, and corresponding market talent provide shortage information, so that students can understand the number of their competitors in employment. At the same time, the employment management department of the school can cooperate with other departments to organize the employment mobilization conference, to increase students' confidence in employment and provide effective guidance for students to overcome the psychological crisis in employment.

#### 4.2 GIVE PLAY TO THE ROLE MODEL EDUCATION FUNCTION TO ALLEVIATE THE FEAR OF EMPLOYMENT

Vocational colleges in employment psychological crisis intervention should help students reduce the fear of employment, to this end, can play the role of example education, to provide students with some real, highquality employment cases of the school, so that students based on example cases to compare their actual situation, understand their own competitive advantages and shortcomings, so as to make a reasonable plan for employment. the selection of high-quality employment cases of the same school and the same major can be collected by each department, and the successful graduates can be invited to the school to impart experience to their brothers and sisters. It is also possible to build a corresponding communication platform so that students can realize the communication with role models, so as to form a positive employment psychology.

#### 4.3 EXPAND INTERNSHIP POSITIONS IN ENTERPRISES AND IMPROVE STUDENTS' CONFIDENCE IN EMPLOYMENT

Vocational colleges should also pay attention to improve students' confidence in employment, help students to analyze the problems existing in the process of job hunting and employment, and actively solve these problems when intervening students' psychological crisis in employment. At the same time, the university should give full play to the advantages of schoolenterprise cooperation, strengthen the cooperation with more enterprises, expand the internship positions provided by enterprises, so that our students have more choices and lay a good foundation for their future employment. Students will be nervous at their first internship, but after some internship experience, students will be more confident. In addition, higher vocational colleges can further carry out schoolenterprise cooperation in running schools. For example, some schools have designed the forms of "order class" and "double enrollment", so as to directly form an effective connection between talent training and student employment, so as to let more students learn Students can successfully achieve employment.

4.4 TO HELP CAREER PLANNING, ONE TO ONE EMPLOYMENT PSYCHOLOGICAL GUIDANCE

Career guidance courses in higher vocational colleges are generally in the form of public courses, with fewer teachers and more students, so it is difficult for teachers to achieve one-to-one career guidance. Guidance on students' career planning is often only in the form of case teaching, and then students are asked to submit corresponding career independent planning reports. In view of the frequent employment psychological crisis of students in higher vocational colleges, higher vocational colleges should pay more attention to the intervention of students' employment psychological crisis, and form one-to-one employment psychological guidance through the free opening of the campus psychological consultation room. Counselors should also strengthen the observation of graduating students and interview students with employment psychological crisis, so as to effectively guide students out of the shadow of employment psychology and improve the initiative of employment.

#### 4.5 INTRODUCE HOME-SCHOOL COOPERATION MECHANISM TO GUIDE FAMILY EMPLOYMENT EDUCATION

Parents of students in higher vocational colleges may bring some employment pressure to students, or some unscientific employment ideas, such as some parents require students to find high-paying jobs, or require students to participate in the preparation of the exam, but also some parents in advance for students to find a good work unit, so that students in accordance with the parents' ideas for employment. These behaviors of parents have excessively interfered with students' life, study and normal employment. Therefore, vocational colleges can introduce home-school cooperation mechanism to form effective communication with students' parents, so as to avoid excessive employment pressure brought by parents to children.

#### 5. CONCLUSIONS

In the complex and changeable employment situation, vocational college students employment psychological crisis is objective existence, vocational colleges have the obligation, responsibility to help students solve the psychological crisis. Through strengthening management and intervention, higher vocational colleges help students face up to the objective fact of job hunting and employment, start from changing themselves, improve the ability to resist pressure and frustration, show their best state and advantages in the process of job hunting, actively participate in job hunting, expand flexible job hunting ideas, develop their own potential, establish the right job hunting orientation, so as to successfully achieve employment.

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## Discussion on the Problems and Improvement Suggestions of Employment Guidance for College Students

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Abstract: After the implementation of the policy of expanding enrollment in universities, the employment problem of college students has become prominent. This article analyzes the significance of career guidance for college students from two aspects: guiding students' career planning and improving their self-awareness. It also analyzes the problems of unreasonable curriculum design, weak professional ability of teachers, and insufficient employment information in the employment guidance work for college students. An analysis was conducted on the issues, and the optimization of curriculum settings, the construction of rich organizational forms, the establishment of a professional teacher team, and the construction of an employment information platform were discussed to enhance the employment guidance work for college students. The improvement strategy has been analyzed, hoping to provide reference for people who are interested in this topic.

Keywords: College students, Employment guidance, Employment Information.

#### 1. INTRODUCTION

Employment guidance can help students form a correct employment perspective and clarify their employment direction. However, in vocational colleges some teachers do not attach great importance to this work and understanding have insufficient of industry development trends, making it difficult to fully utilize the significance of this course. To improve this situation, teachers need to construct course content based on student's understanding of employment and guide students in career planning And apply information technology to build a scientific employment information platform providing assistance for students' employment. 2. THE SIGNIFICANCE OF CONDUCTING EMPLOYMENT GUIDANCE FOR COLLEGE STUDENTS

2.1 GUIDING STUDENTS CAREER PLANNING

Conducting employment guidance work in colleges and universities has the significance of guiding students career planning. Firstly, employment guidance is a course that introduces students to the employment situation and provides employment information. After understanding employment knowledge students can form correct values, lay a good foundation for career development, eliminate employment misunderstandings and seize the initiative in employment Secondly, some college students need to spend a lot of time transforming their roles after graduation failing to seize good employment opportunities, and even having the problem of improper industry choices making it difficult to realize their life value. Some students have unclear employment positioning and frequent job changes which have a certain impact on their development. But vocational colleges carry out employment guidance work and students can make career plans with the help of teachers and improve their ability to choose their own careers.

#### 2.2 ENHANCING SELF-AWARENESS

The employment guidance work for college students has the significance of improving their self-awareness Firstly, conducting employment guidance work in colleges and universities allows students to understand their strengths under the guidance of teachers and choose industries suitable for them based on industry development trends helping them improve their job search and career selection abilities. And at present there is a problem of "using not what you learn in employment. Providing employment guidance and teaching to college students can help them understand the market environments demand for talent clarify employment direction and avoid the problem of employment confusion. Secondly, vocational colleges can provide employment guidance courses during the early stages of student enrollment which can help students form employment awareness clarify their learning direction, and improve their learning effectiveness.

### 3. PROBLEMS IN EMPLOYMENT GUIDANCE FOR COLLEGE STUDENTS

#### 3.1 UNREASONABIE COURSE DESIGN

When conducting employment guidance work in colleges and universities there is a problem of unreasonable curriculum design Firstly, employment guidance courses can help students build development goals and improve their learning effectiveness. However some colleges and universities do not attach high importance to this course and do not construct a curriculum structure based on students actual learning and professional situations. Additionally, the employment guidance content applied in some colleges and universities is relatively outdated Course design was not carried out in accordance with the development trend of the times. Secondly, influenced by traditional teaching methods, some employment guidance teachers still use indoctrination teaching methods and the course content is relatively simple without combining practice with theory which reduces the effectiveness of the employment guidance curriculum.

### 3.2 TEACHERS PROFESSIONAL ABILITIES ARE NOT STRONG

At present there is a problem of teachers weak professional abilities in the employment guidance work for college students. Firstly, due to the close relationship between teachers professional abilities and teaching effectiveness, However, some colleges and universities do not attach enough importance to this course and even arrange for teachers from other subjects to teach on their behalf. As this teacher is not a professional. it is difficult for them to control the key content of the course during teaching and they are unable to provide employment assistance for students. Secondly, due to the monotony of employment guidance courses, in order to improve teaching effectiveness teachers need to integrate information technology into the courses and regularly lead students in practical activities. However due to the low professionalism of some college teachers it is difficult to teach in this direction.

### 3.3 INSUFFICIENT EMPLOYMENT INFORMATION

There is a problem of insufficient employment information in the employment guidance work for college students. Firstly, students can understand the development of the industry through employment information and adjust their learning direction appropriately. However, some colleges and universities have not built this platform making it difficult for students to obtain employment information which has a certain impact on their career development. In addition when colleges and universities do not analyze employment information the effectiveness of their employment guidance courses is also low making it difficult to fully realize the significance of this course. Secondly, students can plan their careers through employment information but colleges and universities have not arranged dedicated personnel to update employment information which makes it difficult for existing employment information to meet students needs and provide assistance for students career planning.

#### 4. STRATEGIES FOR IMPROVING EMPLOYMENT GUIDANCE FOR COLLEGE STUDENTS

#### 4.1 OPTIMIZE COURSE OFFERINGS

In the development of employment guidance for college students. it is necessary to optimize the curriculum. Firstly, students at different stages need to have different understandings of employment guidance work to gradually deepen their understanding and guide them to adjust their learning direction. For example, in the early stages of curriculum development teachers can focus on building awareness of employment guidance learning combining practice with theory and stimulating students learning awareness:In the middle of the course teachers can focus on cultivating students ability to analyze employment information as their main teaching task, improving their ability to analyze industry development and laving a solid foundation for their future employment planning. As graduation approaches teachers can provide targeted assistance to students in constructing employment plans unleashing the significance of employment guidance courses and solving the problem of employment difficulties [1]. Secondly, in order to improve the effectiveness of curriculum. design, teachers need to combine practical courses with theoretical content and guide students to carryout"simulated job fairs"activities. For example when leading students through this activity teachers first guide them to learn how to create resumes and help them improve their industry competitiveness In this process teachers need to play the role of interviewers Ask students a series of questions to help them understand the job fair and continuously improve themselves. In addition, in order to improve the practicality of the curriculum design, teachers need to gradually guide students in learning and play the role of employment guidance courses.

4.2 BUILDING A RICH ORGANIZATIONAL FORM At present when carrying out the teaching of Employment guidance courses in vocational colleges it is necessary to establish a rich organizational form. Firstly, under the call of the education department more and more universities are optimizing employment guidance courses to make them diverse. However in order to improve the pertinence of employment guidance personal files can be constructed for students integrating various information such as their learning and internship situations into it. As graduation approaches, teachers can analyze students employment directions based on this content avoiding students from entering employment misconceptions and realizing the practical significance of employment guidance courses. Secondly, due to the study period for college students is three years, and students need to gradually establish employment awareness and construct employment plans. This learning volume is relatively large. In order to improve students' theoretical and practical abilities in this course, teachers need to guide them, so that they can gradually form a sense of self-development and lay a good foundation for future work. In order to ensure its scientific application, it is necessary to arrange a dedicated person to be responsible for system monitoring and management, install virus detection software for the system, avoid the problem of data loss caused by external environment invasion, and improve the effectiveness of employment guidance teaching. Secondly, due to the issue of delayed information updates in some colleges and universities, in order to avoid this problem, specialized teachers can be arranged to conduct market environment analysis, industry development trend sorting, and other work. the sorted data can be transmitted to the employment service guidance platform to improve the timeliness and pertinence of information.

### 4.3 ESTABLISHING A PROFESSIONAL TEACHER TEAM

In order to improve the effectiveness of employment guidance courses in vocational colleges, it is necessary

to establish a professional teacher team. Firstly, some vocational colleges do not attach importance to employment guidance courses, and the professionalism of teachers is not high, which reduces the effectiveness of teaching. In order to improve this situation, the education department needs to regularly carry out training work, such as in teacher meetings, Excellent course instructors can showcase courses and explain the construction methods of employment guidance courses to teachers, helping them improve their teaching abilities and meet their teaching needs. In addition, in order to address the issue of teacher substitution, the Ministry of Education needs to increase its management efforts, conduct regular inspections of various vocational colleges, and increase the level of attention given to this course by the management personnel of each vocational college [2]. Secondly, in order to achieve the goal of building a professional teacher team, it is necessary to improve the job standards of teachers. For example, the education department can require employment guidance teachers to have knowledge in psychology, education, sociology, and other fields, be familiar with national labor laws and related laws, so that employment guidance courses can help students achieve the goal of career planning. In summary, when conducting employment guidance teaching in colleges and universities, due to the low attention paid by some colleges and universities to this course, the course content was not constructed according to the actual situation of students, resulting in low teaching effectiveness. In order to improve this situation, the education department needs to increase the attention level, regularly carry out teacher training work, improve teaching effectiveness, and solve the problem of student employment. In addition, during employment guidance teaching, colleges and universities can build employment information platforms, publish industry information, assist students in career planning, and leverage the practical significance of employment guidance course teaching.

### 4.4 BUILDING AN EMPLOYMENT INFORMATION PLATFORM

At present, when conducting employment guidance teaching in colleges and universities, in order to play its practical educational significance, it is necessary to build an employment information platform. Firstly, in the context of the continuous development of information technology, employment guidance work can change its application form. For example, colleges and universities can build an employment guidance service platform and divide it into several parts

according to students' application needs. Students can query information according to their own application needs, Meet their employment guidance application needs [3]. In addition, after building this platform, In order to ensure its scientific application, it is necessary to arrange a dedicated person to be responsible for system monitoring and management, install virus detection software for the system, avoid the problem of data loss caused by external environment invasion, and improve the effectiveness of employment guidance teaching. Secondly, due to the problem of untimely information updates in some colleges and universities, in order to avoid this problem, specialized teachers can be arranged to conduct market environment analysis, industry development trend sorting, and other work. The sorted data can be transmitted to the employment service guidance platform to improve the timeliness and pertinence of information.

#### 5. CONCLUSIONS

In summary, when conducting employment guidance teaching in vocational colleges, due to the low attention paid by some colleges to this course and the failure to construct course content according to the actual situation of students, the effectiveness of teaching is not high. In order to improve this situation, the education department needs to increase the attention level, regularly carry out teacher training work, improve teaching effectiveness, and solve the problem of difficult employment for students. In addition, during employment guidance teaching, colleges and universities can build employment information platforms to publish industry information, assist students in career planning, and leverage the practical significance of employment guidance course teaching.

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## Design Principles and Methods for Computer Course Development: A Comprehensive Study

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Abstract: Computer courses play a vital role in preparing students for the ever-evolving field of technology. the design of these courses significantly influences students' learning experiences and outcomes. This paper aims to explore the principles and methods for designing effective computer courses. It provides a comprehensive study that highlights the kev considerations, strategies, and best practices in course development. By examining various aspects of course design, including curriculum planning, learning objectives, instructional strategies, assessment methods, and resources, this research aims to guide educators in creating engaging and impactful computer courses. the findings contribute to the advancement of computer education by providing valuable insights into the design principles and methods that can enhance students' learning experiences in this rapidly evolving domain. Keywords: Computer Course, Course Design, Teaching.

#### 1. INTRODUCTION

In today's digital era, computer education plays a pivotal role in equipping students with the knowledge and skills necessary to thrive in a technology-driven society. [1] As technology continues to advance at a rapid pace, it is essential to design computer courses that are not only comprehensive but also engaging and effective. the design of these courses has a profound impact on students' learning experiences, motivation, and overall success.

The purpose of this paper is to delve into the principles and methods underlying the design of computer courses. By exploring various aspects of course design, including curriculum development, learning objectives, instructional strategies, assessment techniques, and resource selection, we aim to provide educators with valuable insights and guidelines for designing computer courses that foster student engagement and enhance learning outcomes.

To begin, we will examine the fundamental principles that should underpin the design of computer courses. These principles encompass aspects such as flexibility, customization, sustainability, and adaptability, which are essential for addressing the diverse learning needs and evolving demands of students in the digital age. By incorporating these principles into the course design process, educators can create learning experiences that are relevant, dynamic, and responsive to the everchanging landscape of technology.

Moreover, we will explore a range of methods and approaches for developing computer courses. This includes the process of curriculum planning, which involves setting clear learning objectives, sequencing content, and identifying appropriate instructional strategies. We will also discuss effective methods for assessing student progress and understanding, as well as selecting and utilizing relevant resources to support the learning process. By adopting research-based and innovative methods, educators can create engaging and interactive learning environments that promote active participation and knowledge retention.

By examining the principles and methods of computer course design, this research seeks to empower educators with the tools and knowledge needed to create impactful and meaningful learning experiences for their students. It is through thoughtful and intentional course design that we can equip the next generation of computer professionals with the skills and competencies required to excel in a rapidly evolving technological landscape. 2. PRINCIPLES OF COMPUTER COURSE DESIGN

#### 2.1 FLEXIBILITY

Flexibility is a crucial principle in designing computer courses that cater to the diverse needs and learning styles of students. [2] Recognizing that students enter the course with varying levels of prior knowledge and different goals, it is essential to provide flexibility in course structures. One way to achieve this is by offering multiple pathways or elective modules within the course. This allows students to choose topics or projects that align with their interests and career aspirations, promoting a sense of ownership and motivation. Additionally, incorporating flexible assignment options, such as allowing students to choose from a set of tasks or tailor assignments to their specific interests, provides opportunities for personalized learning experiences.

#### 2.2 CUSTOMIZATION

Customization is another vital principle in computer course design. By allowing students to personalize their learning experiences, we empower them to take ownership of their education and enhance their engagement. One effective strategy is to provide choices within the course, such as offering project options or specialization tracks. For example, in a programming course, students could choose between developing a web application or creating a mobile app, based on their interests and career goals. Furthermore, individualized assignments can be incorporated, where students have the flexibility to explore topics or solve problems that align with their specific interests or real-world scenarios. [3] This customization fosters intrinsic motivation and promotes a deeper level of understanding and mastery. 2.3 SUSTAINABILITY

In the ever-evolving field of computer science, sustainability is a crucial principle in course design. It is vital to create courses that remain relevant and adaptable to emerging technologies and industry trends. This requires educators to stay informed about the latest advancements, tools, and techniques in the field. Continuous professional development and collaboration with industry professionals can provide valuable insights and ensure the integration of current practices into the curriculum. Moreover, fostering a culture of continuous improvement within the institution allows for ongoing evaluation and revision of course content, ensuring that it aligns with the evolving needs of the industry and prepares students for future challenges. [4] 2.4 ADAPTABILITY

Adaptability is a key principle in designing computer courses that prepare students for the dynamic nature of the field. Technology advancements and industry demands can change rapidly, making it essential to equip students with adaptable skills and a growth Course should mindset. design incorporate opportunities for students to develop problem-solving, critical thinking, and learning-to-learn skills. This can be achieved through hands-on projects, case studies, and real-world applications. Additionally, integrating interdisciplinary approaches and encouraging students to explore connections between computer science and other disciplines enhances their ability to adapt and apply their knowledge in various contexts.

By adhering to these principles of flexibility, customization, sustainability, and adaptability, educators can design computer courses that meet the diverse needs of students and prepare them for success in a rapidly evolving field. These principles provide a solid foundation for creating engaging, relevant, and impactful learning experiences.

### 3. METHODS FOR EFFECTIVE COMPUTER COURSE DESIGN

#### 3.1 CURRICULUM PLANNING

Effective curriculum planning is essential for designing computer courses that promote student learning and achievement. This involves defining clear learning objectives aligned with industry standards and considering the needs and background of the students. Curriculum planning should incorporate a logical sequence of topics and activities that build upon foundational knowledge and skills. By carefully mapping out the curriculum, educators can ensure a coherent and progressive learning experience for students. Additionally, the integration of real-world examples, case studies, and practical applications can enhance the relevance and practicality of the course content. [5]

#### 3.2 INSTRUCTIONAL STRATEGIES

Choosing appropriate instructional strategies is critical to engage students and facilitate their understanding of complex computer concepts. Incorporating a variety of teaching methods, such as lectures, discussions, handson activities, group projects, and multimedia resources, caters to different learning preferences and encourages active participation. Furthermore, integrating problemsolving and project-based learning approaches allows students to apply theoretical concepts in practical scenarios. Providing opportunities for collaborative learning, peer feedback, and reflection fosters a supportive and interactive learning environment. [6] 3.3 ASSESSMENT TECHNIQUES

Effective assessment techniques play a vital role in measuring student progress, identifying areas for improvement, and providing meaningful feedback. Assessments should align with the course objectives and reflect the skills and knowledge required in the field. Alongside traditional exams and quizzes, incorporating practical assignments, coding exercises, and project evaluations can assess students' practical skills and problem-solving abilities. Additionally, formative assessments, such as self-assessments, peer assessments, and portfolio assessments, promote student reflection, self-regulation, and deeper learning.

#### 3.4 RESOURCE SELECTION

Selecting appropriate learning resources is crucial in supporting student learning and expanding their understanding of computer concepts. Educators should consider a range of resources, including textbooks, online tutorials, interactive multimedia, open educational resources, and industry-specific tools. [7] By leveraging a variety of resources, students gain access to diverse perspectives and learning opportunities. Additionally, promoting critical evaluation of resources and fostering digital literacy skills helps students navigate the vast amount of information available and distinguish reliable sources from misinformation.

By employing effective curriculum planning, instructional strategies, assessment techniques, and resource selection, educators can create engaging and effective computer courses. These methods provide students with a comprehensive learning experience, fostering their knowledge acquisition, skills development, and problem-solving abilities.

4. CONTINUOUS IMPROVEMENT AND EVALUATION OF COMPUTER COURSES

### 4.1 IMPORTANCE OF CONTINUOUS IMPROVEMENT

Continuous improvement is vital in ensuring the effectiveness and relevance of computer courses. As technology and industry demands evolve, it is crucial to regularly evaluate and enhance course design to meet the changing needs of students and the field. By embracing a culture of continuous improvement, educators can ensure that their courses remain current, engaging, and impactful. Ongoing evaluation and feedback from students, peers, and industry professionals provide valuable insights for identifying areas of improvement and making necessary adjustments. It is through this iterative process that courses can evolve and better meet the needs of learners. 4.2 METHODS FOR COURSE EVALUATION

To evaluate the effectiveness of computer courses, educators can employ various methods that provide valuable feedback on student learning and course design. One approach is to gather student feedback through surveys or interviews. This allows students to share their perspectives on the course structure, content, instructional methods, and assessments. Student feedback provides valuable insights into their engagement levels, learning experiences, and areas where improvements can be made.

Course assessments also play a crucial role in evaluating the effectiveness of computer courses. By analyzing student performance on assignments, projects, exams, and other assessments, educators can identify areas where students may be struggling or excelling. This information helps in identifying gaps in the curriculum or areas where instructional adjustments may be needed. Additionally, learning analytics can provide valuable data on student engagement and progress. By leveraging educational technology platforms, educators can gather information on student participation, completion rates, time spent on tasks, and performance. This data can inform decisions on instructional strategies, identify students who may require additional support, and facilitate personalized learning experiences.

4.3 APPLYING FEEDBACK AND MAKING COURSE ADJUSTMENTS

The feedback gathered through evaluation processes should be carefully considered and used to inform course adjustments. Educators can reflect on student feedback, performance data, and emerging trends in the field to identify areas for improvement. Adjustments may include modifying instructional strategies, updating course content, integrating new technologies or tools, or revising assessments. It is crucial to strike a balance between maintaining the integrity of the course objectives and making necessary adaptations to enhance student learning experiences.

Additionally, collaboration with colleagues and industry professionals can provide valuable insights and external perspectives on course design. Engaging in professional development opportunities, attending conferences, or participating in communities of practice can help educators stay informed about emerging trends, best practices, and innovative approaches in computer education.

By continuously evaluating and improving computer courses, educators can create dynamic, learner-centered environments that foster student engagement, promote effective learning, and prepare students for success in the field of computer science.

#### 5. CONCLUSION

In conclusion, designing computer courses that effectively engage students and facilitate their learning is crucial in preparing them for success in the field of computer science. By following key design principles and employing effective methods, educators can create engaging and impactful learning experiences for their students.

Throughout this paper, we have explored the principles of flexibility, customization, sustainability, and adaptability as essential considerations in computer course design. These principles provide a solid foundation for creating courses that cater to the diverse needs, interests, and goals of students. By offering flexibility in course structures and assignments, allowing customization options, staying abreast of industry trends, and fostering adaptability, educators can create courses that are relevant, engaging, and future-proof.

Moreover, we have discussed methods for effective computer course design, including curriculum planning, instructional strategies, assessment techniques, and resource selection. These methods contribute to the creation of dynamic and learner-centered environments that promote active learning, problem-solving, and practical application of computer concepts. By incorporating a variety of teaching methods, providing opportunities for collaboration, and utilizing diverse learning resources, educators can enhance student engagement and understanding.

Furthermore, we have emphasized the importance of continuous improvement and evaluation in computer course design. Ongoing feedback from students, peers, and industry professionals, along with the analysis of student performance data and learning analytics, can inform course adjustments and improvements. By embracing a culture of continuous improvement, educators can ensure that their courses remain effective, relevant, and responsive to the changing needs of students and the field.

In conclusion, designing computer courses that align with the principles of flexibility, customization, sustainability, and adaptability, while employing effective methods, is essential in promoting student engagement, motivation, and learning outcomes. By embracing these principles and methods, educators can empower students to become confident and skilled computer professionals, ready to tackle the challenges of the ever-evolving digital landscape.

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## Review of Mobile Learning and Learner Autonomy

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Abstract: Mobile learning realizes ubiquitous learning with the rapid development of wireless networks and multiple functions of mobile devices nowadays. This paper aims to explore the impact of mobile learning on the development of autonomous learning ability of non-English majors. Firstly, the background of mobile learning and learner autonomy are introduced and analyzed. Secondly, the definition of mobile learning from different perspectives are discussed and the projects on mobile learning are introduced. Thirdly, We give the literature review of learner autonomy from two aspects. Finally, a summary of the literature review was conducted. Mobile learning has become a popular learning trend in the field of education. the studies show that we need to take advantage of new technology and mobile devices to promote a new learning model that would supplement traditional learning.

Keywords: Mobile Learning, Learner Autonomy, English Learning

#### **1. INTRODUCTION**

Mobile learning has been a new learning model in the 21<sup>st</sup> century. After the educational method of face-toface teaching, distance learning, and e-learning, now it has come to a new stage, that is mobile learning. It realizes ubiquitous learning with the rapid development of wireless networks and multiple functions of mobile devices. With mobile devices, such as smartphones, laptops, Pads, etc., people are able to learn anywhere at any time, without the restriction of time and space. the places where people used to learn are expanding from the classroom and library to the outdoors, cafes, even buses and subways. Moreover, people can learn according to their own learning paces. Thus, mobile learning has become more and more popular in recent years.

After the worldwide spread of the COVID-19 in 2020, many students cannot study as they used to do. Their learning routine has changed in a short time. They are not allowed to come to their schools, let alone to get classroom teaching. Under this circumstance, education via the Internet becomes an essential way of learning. Teachers give lectures via visual classroom like Zoom, and students receive instruction at home with a desktop computer or other devices that can connect with the Internet. According to Cisco's survey, "From 2014 to 2019, the growth rate of global mobile data traffic is three times that of desktop computers." the Pew study found that today one in five American adults are "smartphone-only" Internet users. They own a smartphone but do not have traditional home broadband services [<sup>1</sup>] It means that if learners rely on the desktop, they may not be able to continue learning at home. Many families do not have a desktop computer in China, but almost every family has at least one smartphone, making mobile learning possible for Chinese students.

In this paper, some definitions of mobile learning from different perspectives are briefly introduced. Then, some projects on mobile learning are presented. Mobile English learning studies abroad and at home are introduced as well. In the last part of this paper, the definition of learner autonomy is introduced, and the previous studies on learner autonomy are presented.

### 2. LITERATURE REVIEW OF MOBILE LEARNING

Mobile learning (M-learning) is a new learning model based on digital learning combined with mobile network technology. Mobile learning has dramatically changed the way people learn. Nowadays, learners are likely to use mobile devices, such as smartphones, tablets, laptops, etc., to acquire information anytime and anywhere.

#### 2.1 Definitions of mobile learning

In recent one or two decades, mobile learning has become a hot topic in the field of education. Many scholars have made a thorough study on mobile learning and gave different definitions of it. Though various definitions of mobile learning have been put forward, they can be divided into two categories: one emphasizes technology, and the other focuses on learning mode.

#### 2.1.1 Definitions from the perspective of technology

Most researchers believe that the basic feature of mobile learning is mobility, which is a combination of mobile technology and education. In this view, mobile learning is viewed as learning using mobile devices such as laptops, mobile phones, PDAs, Tablets, iPods, PSP (Play Station Portable), etc. These devices can deliver and present learning content with the help of wireless technology and enable learners to interact with others.

(1) Clark Quinn (2000)[<sup>2</sup>] thinks mobile learning is "eLearning through mobile computational devices: Palms, Windows CE machines, even digital cell phone". (2) Alexzander Dye (2003)[<sup>3</sup>] put forward a definition of M-learning in his article *Mobile Education a glance at the future*. M-learning is "learning that can take place anytime, anywhere with the help of a mobile computer device. the device must be capable of presenting learning content and providing wireless two-way communication between teacher(s) and student(s).

(3) In the Learning2Go Project, the definition of mobile learning is as "the type of learning that takes place when the learner has some kind of mobile computer, making use of its connectivity, location awareness, content and applications to learn at a time and place of the learner's choosing"<sup>[4]</sup>.

### 2.1.2 Definitions from the perspective of learning mode

Some researchers hold the view that the study of mobile learning should not only stress the devices but also discuss how mobile learning can bring changes to learners' learning methods. This point of view has resulted in some definitions that emphasize learning mode instead of learning technology.

(1) Chabra & Figueiredo (2002)[<sup>5</sup>] think that mobile learning is "the ability to receive learning anytime, anywhere and on any device".

(2) Ronghua Huang (2008) [<sup>6</sup>] believes mobile learning is "any type of learning that occurs when the learner is not in a fixed, pre-set location, or when the learner makes use of the advantages provided by mobile technology".

(3) El-Hussein & Cronje (2010) [<sup>7</sup>] points out that mobile learning is any type of learning that happens in learning environments and spaces taking account of mobility of learners, mobility of technology and mobility of learning.

#### 2.1.3 Definition of mobile learning in this paper

Based on various definitions of mobile learning mentioned above, we can see that the scholars paid much attention to the technology and learning mode of mobile learning but overlooked the active role of teachers or tutors in mobile learning. Actually, teachers can help and supervise students in mobile learning, and online tutors also play a very important role in guiding, monitoring, and evaluating students' learning. Mobile learning is not only the interaction between learners and mobile devices, but also involves the interaction between learners and teachers. With the help of teachers and online tutors, students can get more benefits from mobile learning. Hence, we propose the following definition: mobile learning is the learners' active learning process using wireless network and mobile learning devices (smartphones, pads, laptops, etc.) to get learning resources anytime and anywhere according to individual learning needs, and this process can promote interaction and collaboration between learners and teachers. Mobile learning integrates and expands the advantages of traditional D-learning and E-learning, changes people's learning methods, and becomes a focus of education reform.

#### 2.2 Projects on mobile learning

With the rapid development of mobile learning, many institutions and universities carried out influential projects on M-learning. Seven major projects are listed in this part.

#### 2.2.1 From e-Learning to m-Learning

Desmond Keegan presided over a mobile learning research project called "From e-Learning to m-Learning" with the support of the Leonardo da Vinci program of

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the European Union. He published the book the *Future* of Learning: From Digital Learning to Mobile Learning in 2002, which introduced the project's research results in detail.

The project was jointly researched by Ericsson Education, NKI Distance Education Institution of Norway, Open University of Germany, International Distance Education Institution of Ireland, and the Third Open University of Rome, and was hailed as "the pioneer of future learning".

The project focuses on the collection of WSP-based mobile learning content, concentrating on the viability of mobile learning technology, the advantages and drawbacks of mobile learning, and the creation and design of mobile learning courses.

#### 2.2.2 MOBILearn

Europe has always been at the forefront of global mobile communication technology, so the importance of mobile applications has always been significantly attached. In July 2001 international conference on mobility in the knowledge economy was held in Gothenburg, Sweden, in which the importance of mobile communication technology in the knowledge economy society and its impact on education was discussed. In the EU's "e-Europe Action Plan", a special mobile learning research plan called "MOBIlearn Action" was launched, with the purpose of applying the latest communication technology to the education system, especially the latest wireless mobile communication technology.

The plan started in July 2002 and was completed on December 31, 2004, with a funding of 7.5 million euros. Cooperative institutions include some well-known universities with existing user bases (such as the Open University of the United Kingdom, the University of Southern Queensland in Australia, the University of Birmingham, etc.), and world-class academic research institutions in the United States (such as Stanford University, MIT Open Knowledge Institute, etc.), as well as some telecom operators. They jointly established a "mobile learning alliance" to systematically plan the entire research.

The project research involves almost all aspects of mobile learning, from new learning paradigms to business operation models, from learning content and resource development to new learning model researches (situational awareness, collaborative learning, adaptive learning), from mobile learning system design to testing and release, from system evaluation to management.

#### 2.2.3 M-Learning

M-Learning project was jointly launched by the Learning and Skills Development Agency (LSDA), Centre of Research in Pure and Applied Mathematics (CRPAM), Cambridge Training and Development Department (CTAD), Ultra lab in the UK, and Sweden's digital learning companies Lecando AB. the project started in October 2001 and aimed to promote learning with mobile technology.

The main contents of the research include:

(1) Application research of mobile phone technology, including research on the needs, characteristics, attitudes, and young adult users' habits;

(2) Research into computer game design and consumer characteristics;

(3) Research on effective approaches for the appropriate knowledge presentation, different learner models and learning standards.

#### 2.2.4 Research of the University of Birmingham

The educational technology group of the University of Birmingham has gathered researchers from the computer, education, psychology and electronic engineering to develop and evaluate new interactions based on in-depth research on how humans think, learn, and communicate. the main issues of the current research are divided into five themes:

(1) Human-Centered System Design;

(2)Mobile and Contextual Learning;

(3)Technology-Mediated Flexible Learning;

(4)Computer-Based Training and Support in Medicine;(5)Adaptive Learning Environments.

The team also launched a particular project called "Hand held Learning Resource", aiming to apply mobile communication technology to learning. the content of the project research includes the interactive design of handheld learning devices and system engineering, wearable learning technology, knowledge sharing between mobile learners and support technology for dialogue and communication. They developed a mobile learning software "Map It" based on the Windows CE system that runs on handheld computers, and put forward the concept of "concept map" and applied it to mobile learning.

#### 2.2.5 Research of Stanford Learning Lab

Stanford University has been a leader in the field of distance education and digital learning in the United States. the use of smartphones in language teaching at school is an innovative project of Stanford Learning Lab (SLL). In the summer of 2001, SLL developed an initial model of mobile learning. They choose foreign language learning as the course content of mobile education. Mobile devices are preliminarily presumed to help provide learning opportunities in a safe, reliable and customized environment for reviewing, listening, and speaking.

The researchers conducted three independent tests and did informal experiments on several language learners with different skill levels. the three tests included text quizzes, live lectures, and interactive audio. As a result, both pros and cons raised their opinions. Although the experiment did not yield clear results, SLL is still very interested in the potential advantages of a step-by-step, rich and flexible language learning environment provided by interactive audio.

Through research, the conclusion of SLL is:

(1) Mobile learning is a highly fragmented experience;(2) Learning is a process of individualization and emotion;

(3) the user's learning frustration will destroy their trust in the system and reduce their learning.

#### 2.2.6 Mobile learning in China

September 2020, China Internet Network In Information Center (CNNIC) released its 49th Statistical Report on Internet Development in China. According to the report, "China had 940 million netizens, and its Internet penetration had reached 67.0% as of June 2020. the number of mobile Internet users in China has researched 932 million up to June 2020. the proportion of China's netizens accessing the Internet via their mobile phones has amounted to 99.2%. the proportions of Chinese netizens accessing the Internet through mobile phones, desktop computers, laptops computers, TVs and tablet computers were 99.2%, 37.3%, 31.8%, 28.6% and 27.5%, respectively. the per capita weekly online duration of China's Internet users was 28.0 hours. As of June 2020, the user size of online education was 380.60 million or 40.5% of China's total netizen population; the number of mobile learning users had reached 376.68 million, making up 40.4% of mobile Internet users.

In the second quarter of 2020, with the epidemic contained on an ongoing basis, the scale of online education users declined as primary and secondary schools and universities resumed their classes in an orderly manner. In the first half of 2020, under the guidance and promotion of the policy of "suspended classes and non-stop learning," 282 million students nationwide generally switched to online courses, with the level of IT-based education further enhanced. In the future, the online and offline integration will become a trend in the education industry.

From a supply-side perspective, online education and IT-based education reinforce each other. First, the results of basic IT-based education have laid a solid foundation for the development of large-scale online education. In 2019, 98.4% of primary and secondary schools (including teaching points) nationwide had the access to the Internet. 90.1% of primary and secondary schools had multimedia classrooms, with 10 million teachers engaging in the program of "one teacher producing one excellent course and one lesson taught by one famous teacher. " These results have been fully applied and tested in the epidemic prevention and control, laying a solid foundation for the promotion of online education. Second, the widespread application of online education has substantially promoted the practice of IT-based education. Prior to the epidemic, the products and applications of in-school IT-based education were mostly designed with auxiliary functions for achieving collaboration between schools, parents, and students, and less often involved the output of teaching content. During the epidemic, schools, governments and third-party companies and platforms across China launched online courses timely to enable a real shift to educational innovation.

On the user side, the public's awareness and use of online education increased rapidly during the epidemic. First, local education departments are proactively promoting the use of e-learning platforms. In February 2020, the Ministry of Education and 27 provinces, following the issuance of the *Circular on Working Arrangements* for the "Suspended Classes and Non-Stop Learning" period, opened national and provincial e-learning platforms to provide reliable services for students studying at home. As of May 11, the National Primary and Secondary School Web Cloud Platform had 2.073 billion viewers and 1.711 billion visitors 89. Second, major online education platforms are accelerating their penetration of sinking market. Major online education platforms had responded to the government's call to launch free live courses for students, with the user size growing rapidly.

During the epidemic, the number of daily active users in the online education industry rose from 87 million on weekdays to 127 million after the Spring Festival, an increase of 46%, with new traffic mainly coming from third-, fourth-, and fifth-tier cities. As of June 2020, online education users in third-tier cities and below accounted for 67.5% of overall users, an increase of 7.5 percentage points year-on-year (CNNIC, 2020). Also, it should be noted that, despite the accelerated penetration of online education in the sinking market during the epidemic, there is still much room for improvement in the accessibility and content quality of education services, and there is still a long way to go before achieving universal education in remote areas.

The integration of online and offline education is the general trend in the future. In July, the National Development and Reform Commission, the Office of the Central Cyberspace Affairs Commission, the Ministry of Industry and Information Technology and other ten departments jointly issued the Opinions on Supporting the Healthy Development of New Forms and Models of Business and Activating the Consumer Market to Expand Employment, making clearly that convergent online education should be developed vigorously to build an integration mechanism for online and offline education in a bid to develop a sound interactive model. In the future, as relevant government improve the intellectual property departments protection, content supervision, market access and other institutional norms for online education, schools can gradually explore the inclusion of excellent online resources into the daily teaching system and carry out classroom teaching based on a smart online environment in an effort to achieve a higher goal of educational training and output.

Under the influence of the Internet, mobile high-speed networks, big data and cloud computing, MOOC, flipped classroom, khan academy, multimedia, and other new teaching methods emerging in education have brought a huge impact on the development of the traditional field of education. Thus, personalized, convenient, interactive, and flexible mobile learning mode has become one of the most important learning methods in an explosive information era. M-learning has a great potential for expanding learning opportunities for college students than traditional board and chalk learning or other kinds of electronic learning. **2.2.7 The research of mobile learning in English** 

#### learning abroad

The application of mobile learning in English learning abroad mainly focuses on the effectiveness of mobile English learning, the construction of mobile English learning system and the people's attitude and acceptance of mobile English learning.

(1) Researches on the effectiveness of mobile English learning.

This category of research focuses on the effectiveness of mobile devices on EFL learning. For example, Cavus, & Ibrahim (2009)[8] explored the learning effect of SMS on college students' cognition of new English vocabulary. Through an empirical study of 45 first-year students, it was found that SMS can help learners understand and acquire new English vocabulary quickly. Azad (2014) [9] attempted to investigate m-learning among EFL Sulaimani University students in Iraq and pointed out that 99% of the participants considered smartphones as an effective mobile resource in the process of English language learning, and mobile devices had a significant impact on language learning. Shih, Lee, and Cheng (2015)[<sup>10</sup>] aimed to discover the effects of integrating mobile learning into an English spelling course for college students through the blended teaching method by a six-week experiment and observed that the ability and skills in spelling had been improved.

(2) Researches on the construction of mobile learning platforms.

Many researchers tried to construct mobile English learning platforms to help learners improve their English. For example, the LOCH system developed by Hiroaki, Ryo, and Yoneo in 2004 enabled teachers to determine the difficulty of tasks according to the level of students. With the help of GPS, teachers can also master the geographical location of students and send corresponding tasks according to the environment of students. When students encountered difficulties, they can also receive the correct expression from the teacher in the context. In addition, students can also interact with each other or help each other. Chen and Hsu (2008)<sup>[11</sup>] developed a personalized intelligent mobile learning system that can evaluate learners' English reading level and help them gradually improve their English reading ability. Giasemi (2015)<sup>[12</sup>] stated that using games to carry out mobile learning would become a new way of learning, and it had a significant impact on students. Hazaea and Alzubi (2016) [13] established a conceptual framework for reading practices and mobile assisted language learning (MALL) in the context of EFL to examine the role of mobile applications in the reading classroom at Najran University. the authors found that the participants expanded their reading habits with the use of mobile features and apps. They proved that student-centered mobile learning incorporated with contextualized reading practices was effective for EFL learners.

(3) Researches on the learners' attitude on mobile English learning.

It concerns learners' acceptance and feelings about the application of mobile devices in English learning. For example, So (2016) [<sup>14</sup>] evaluated the condition in the use of mobile instant tools to support teaching and learning in higher education. the study was conducted in the Education University of Hong Kong, where a total of 61 undergraduate students showed a positive attitude and acceptance of the use of WhatsApp for teaching and learning. Mostafa, Hatem, and Khaled (2016) [15] conducted two survey questionnaires for students and educators from five universities in the Arab Gulf region. the research was to test where there was a significant difference among students' and educators' attitudes towards the use of m-learning in English based on different factors, including gender, age, level of study, smartphone ownership. It also revealed that both students and educators were positive about m-learning and significant differences among the students' attitudes towards m-learning with regard to their smartphone ownership and age.

These studies reveal that foreign researches verified the effectiveness of mobile English learning and showed that Mobile learning resources might influence learners' attitudes and behaviors in using mobile learning mode.

### 3. LITERATURE REVIEW OF LEARNER AUTONOMY

Mobile technology is an important external factor for language learning, which can help learners to study more efficiently and productively. Meanwhile, learners' internal factors should also be taken into consideration. Among the many internal factors such as learning goals, prior knowledge, learning strategies, etc., learner autonomy is one of the most important factors and variables. Therefore, this part is about the definition and academic research of learner autonomy.

In recent years, there has been a growing recognition of the importance of learner autonomy in the process of teaching. Promoting an autonomous approach to language learning is especially pertinent. Learner autonomy has grown considerably in the field of language education. Different views of autonomy have been analyzed in comprehensive reviews on the topic.

**3.1 Researches on learner autonomy in EFL abroad** Since the mid-20th century, constructivism and humanistic psychology have emerged, which promoted the development of education. the concept of "learnercentered" education has become popular, at the same time autonomous learning theory and practice have been developed rapidly, which naturally meets the needs of the continuous development of foreign language autonomous learning and further promotes foreign language autonomy. Foreign language autonomous learning has been vigorously promoted globally, and has become a buzzword in the field of language teaching and language learning. In the United States, autonomous learning is regarded as an important tool for promoting language learners' strategy..

For decades, more and more in-depth and extensive researches on learner autonomy have been conducted. However, little research has been carried out from the perspective of mobile learning. Actually, mobile technology makes learner autonomy more realizable because learners can easily get access to learning resources and can learn anytime and anywhere. Li et al. (2012)<sup>[16]</sup> explore how the theories and methodologies of autonomous learning can help analyze and understand the process of mobile learning. Hazaea and Alzubi (2018)<sup>[17</sup>] investigate the role of mobile technology in enhancing learner autonomy in the EFL reading context among students in the Preparatory Year in Saudi Arabia. Leis et al. (2015)<sup>[18]</sup> discuss the advantages of using smartphones in an EFL classroom from the perspective of motivation and autonomy among learners. However, there is no systematic research about the promotion of learner autonomy with mobile learning. the application of mobile technology on learner autonomy of EFL learners is worth further exploring.

3.2 Researches on learner autonomy in EFL in China Research on learner autonomy in China began in the 1990s. Based on a survey of the research articles concerning learner autonomy published in eighteen domestic FL journals over the past fifteen years (1999-2005), Gao (2005)[19] divided the research of learner autonomy in China into three stages, namely the embryonic stage (1991-2000), the slow-progress stage (2001-2003), and the flourishing stage (2004-2005). Since 2004, China has entered the phase of expansion in the research of learner autonomy. Early research on learner autonomy was mainly concerned with the introduction of the theories of autonomy and practices done in the western countries the current stage is characterized by more experimental studies and practice that aims to promote learner autonomy in foreign language teaching and learning.

Domestic research aiming at promoting autonomy in the tertiary context bears the following characteristics. First, they are characterized by practice-led research in which experiments were carried out to understand how to promote autonomy in language learning. There are few theory-led researches which are grounded in the specific Chinese tertiary context.

Second, in comparison with the research devoted to the questionnaire survey or correlation analysis of autonomy and strategy use or motivation, there are fewer researches focusing on the promotion of learner autonomy in language learning. Of the limited researches, researchers mainly focused on strategy training or the SAC context in which they tried to prove the autonomous learning mode help improve learning gains in contrast to the traditional classroom listening mode. Third, the limited empirical studies on the promotion of autonomy in language learning fail to give detailed descriptions as to how they carried out strategy training or how they implemented self-access learning, and in what way their approaches helped to improve learner autonomy.

#### 4. CONCLUSION

Despite the general agreement on the value of learner autonomy in the language learning process, the practical realization of learner autonomy remains elusive in China.

One of the main challenges comes from the elusive nature of learner autonomy. There may be different levels of autonomy and different ways of representing autonomy. As one researcher claims, "This deconstruction of the concept of autonomy arises from the assumption that autonomy is both contextuallyvariable and a matter of degree and from concerns that 'mainstream' views of autonomy pay scant regard to cultural variability within language education on a global scale". How learner autonomy is theorized and practiced varies "from time to time, from context to context, and from culture to culture". Thus, the challenge for the future research is "to move beyond this essentially theoretical proposition towards an empirically-grounded understanding of the ways in which autonomy and the potential for autonomy vary according to factors such as age, gender, cultural context and setting.

Another challenge is the lack of empirical evidence that supports the theoretical assumptions on which different forms of practice are based. First, we need to control extraneous variables in research design as "the effectiveness of self-access in general cannot be separated from the effectiveness of the particular form in which it is implemented or from the effectiveness of its individual elements". Second, we still lack global measurement of autonomy that focuses on directly and indirectly observable behaviors associated with autonomy. Third, the promotion of learner autonomy is concerned with the context in which a particular approach that promotes autonomy occurs. Therefore, any action research project should include an 'ethnographic dimension' in which researchers should gather as much contextual information as possible and seek to convey the look and feel of the form of practice investigated.

A closer inspection of the practice and studies focusing on learner autonomy in the Chinese tertiary context reveals that much work needs to be done for improvement. Although the last few years have seen a growing interest in the study of learner autonomy and investment in the self-access learning facilities in China, a review of the literature shows that studies on how learner autonomy can be promoted among university students and how they learn in the context of self-access are few and far between, the following three factors add to the difficulty of a convincing study. First, the deconstruction of the concept of autonomy is often limited to the early work with no special attention given to the recent theories on autonomy. As a result, there are often narrow interpretations of learner autonomy in research designs. Second, although there is a growing recognition of the importance of learner autonomy, in practice, it is not clear how to implement an effective pedagogy that promotes learner autonomy. Research indicates that Chinese students demonstrate a big difference in adapting to the self-access learning. While this learning mode benefits some students, who can

adapt to it easily or who are highly motivated, the greater majority of students show their incompatibility to the new learning mode. the mismatch between the pedagogical intention and practice has led to the questions such as how to build both a theoretically and empirically supported project with the principles of learner autonomy and second language acquisition. Third, though there are many researches on the benefits of mobile learning for language learning, the empirical evidence showing the relationship between mobile learning and learner autonomy is limited.

In view of the problems stated above, there is a pressing need for a research-led pedagogy that will help individual teachers implement the underlying principles of learner autonomy based on mobile learning in the Chinese tertiary context.

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