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Innovation and Exploration of School-enterprise Curriculum Co-construction Mode for Business English Majors in the Era of Big Data

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Abstract: With the rapid development of information technology and the advent of the era of big data, the changing demand for business English talents has put forward new requirements for the development of business English teaching. Based on the theoretical foundation of the school-enterprise curriculum co-construction mode of the business English major, this paper sorts out the innovative ideas of the school-enterprise curriculum co-construction of the business English major. On this basis, it proposes implementation paths for the school-enterprise course co-construction mode, such as strengthening the cooperation and coordination between schools and enterprises, improving teachers' innovative ability and students' practical application ability, and optimizing the evaluation of course effects. This paper provides some ideas for cultivating business English talents to meet the needs of society and promoting the reform and innovation of business English teaching.

Keywords: Era of Big Data; Business English; School-Enterprise Co-Construction; Curriculum Innovation

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1. Introduction

The goal of the Business English major is to cultivate talents with strong business English literacy and practical abilities, enabling them to effectively communicate and collaborate in English within the business field. However, the rapid development of information technology and the advent of the big data era have significantly transformed people's lifestyles and communication methods. Consequently, the societal demand for business English professionals has evolved, necessitating modern business English talents who are adept in information technology, data handling, and cross-cultural communication contexts. The traditional teaching modes are no longer sufficient to meet these growing societal needs ^[1,2]. This shift presents substantial challenges to the teaching of business English. To better adapt to the current societal and industry development needs, the teaching mode of the Business English major must undergo reform and innovation. Strengthening school-enterprise cooperation is essential to achieve the talent-oriented skills teaching objectives that align with societal demands, thereby improving the quality of education, teaching, and personnel training in this major.

School-enterprise cooperation is an indispensable component of business English education, playing a crucial role in business English teaching practice and promoting the development and innovation of the Business English major ^[3]. In recent years, the school-enterprise curriculum co-construction model for the Business English specialty has developed rapidly. This model aims to facilitate deep cooperation between schools and enterprises, jointly develop business English courses, and enhance

the effectiveness of these courses. It provides students with more practical opportunities and career development platforms. This paper aims to study the innovation and exploration of the school-enterprise curriculum co-construction model for the Business English major in the era of big data. The objective is to offer useful ideas and suggestions for the development and innovation of the Business English major and to provide recommendations for promoting and applying school-enterprise cooperation in business English education.

2. The Theoretical Basis of School-Enterprise Curriculum Co-construction Model for Business English Major

2.1 Business English Teaching is of Great Practicality

The practicality of business English teaching is mainly reflected in the practical needs of the business English teaching environment and tasks. As a highly applied language course, the teaching practice of Business English is reflected in the following aspects:

Directivity: Business English majors are highly directed toward practical applications. The purpose of business English teaching is to enable students to develop strong communicative competence and problem-solving skills in business scenarios. Therefore, the curriculum and teaching content must closely revolve around actual business activities. Business English teaching needs to combine language skills with practical application, allowing students to learn through practice and cultivate talents with business communication and negotiation abilities.

Cross-Cultural Perspective: As an international language, business English must consider the characteristics of business communication and cultural differences across countries and regions. Business English teaching needs to guide students to understand international business practices and communication etiquette, enabling them to master cross-cultural communication skills and methods. By understanding the business cultures of different countries and regions, students can better adapt to transnational business activities and improve the efficiency and accuracy of business exchanges.

Diverse Teaching Modes: Various teaching modes, such as face-to-face teaching, online teaching, simulation exercises, and field visits, are introduced into business English teaching to enrich the content and improve students' interest and participation. Diversified teaching modes provide varied resources, stimulate students' learning interest, and promote the absorption and mastery of knowledge.

Context and Application: Business English is a highly applied language course, and its teaching content must be closely centered on business activities. Teaching needs to guide students to learn business English vocabulary and grammar while emphasizing context and practical application to master language skills and improve application abilities.

Interaction and Practicality: In business English teaching, teachers should use interactive methods to engage every student, enhancing their communicative competence. Practicality should be highlighted through simulated business communication and negotiation exercises to develop students' language usage skills.

In summary, the Business English major is highly practical. Teachers need to immerse students in practical business English environments, using highly simulated language and synchronized teaching content with actual business activities to enhance teaching effectiveness and improve students' professional skills.

2.2 School-Enterprise Cooperation as an Important Way to Cultivate Practical Business English Talents

Business English majors need to possess both a solid language foundation and practical abilities to meet the demands of an increasingly competitive society for business English professionals. Therefore, school-enterprise cooperation has become a vital way to cultivate practical business English talents. School-enterprise cooperation is a long-term collaborative relationship established between schools and enterprises to jointly promote the development and innovation of business English education. Specifically, school-enterprise cooperation has the following characteristics:

Deep Cooperation: School-enterprise cooperation involves teaching, practice, and scientific research. Cooperation in business English education can cover aspects such as educational supply, curriculum development, teacher training, and resource sharing, providing comprehensive and practical support for business English education.

Mutual Benefit and Win-Win: The cooperative relationship between schools and enterprises is based on mutual benefit and

win-win outcomes. Through cooperation, schools can improve the teaching quality and practical abilities of business English majors, offering more practical opportunities and career development platforms for students. Enterprises benefit by enhancing their competitiveness and visibility and gaining access to a pool of excellent talents.

Two-Way Interaction: Cooperation is bidirectional, not unidirectional. Schools gain insights into the actual needs of enterprises, enabling them to adjust business English curricula and teaching content to improve quality and practical skills. Enterprises understand students' learning situations and capabilities, facilitating better talent selection aligned with their needs. This interaction allows for practical problem-solving in business English education and offers students more practical opportunities and career platforms.

Long-Term and Stable Relationships: The cooperative relationship between schools and enterprises is long-term, requiring joint efforts and continuous exploration. This stability provides sustained support for business English education and offers high-quality, stable human resources for enterprises.

In conclusion, as an essential practical component of business English education, school-enterprise cooperation is characterized by deep cooperation, mutual benefit, two-way interaction, and long-term stability. This cooperation provides comprehensive support for business English education, high-quality human resources for enterprises, and abundant practical opportunities and career platforms for students, enhancing their practical abilities and competitiveness to meet the societal demand for business English talents.

2.3 Business English Course Co-construction as an Important Guarantee for the Effectiveness of School-Enterprise Cooperation

Curriculum co-construction refers to the collaborative formulation and implementation of curriculum plans and teaching content by schools and enterprises in business English education. The goal is to enhance the teaching quality and practical abilities of business English students. Through curriculum co-construction, schools and enterprises can create more practical and industry-relevant courses based on the specific needs of business English majors and the current market demands. This approach also provides comprehensive support for teaching through shared resources and practice base construction. Effective curriculum co-construction is essential for deepening school-enterprise cooperation, cultivating high-quality talents to meet societal needs, and ensuring the quality of personnel training. Key aspects of implementing school-enterprise curriculum co-construction include the following:

Formulating Common Curriculum Objectives and Teaching Plans: Schools and enterprises should collaborate to develop practical curriculum objectives and teaching plans based on educational goals and actual needs. This involves combining students' actual needs with their career planning and tailoring courses to align with industry developments and company requirements. This approach strengthens the connection between business English teaching and practice, enhances students' comprehensive quality and competitive advantages, and aligns with enterprise needs for business operations.

Developing Textbooks and Teaching Resources Together: Schools and enterprises can jointly develop teaching materials and resources suitable for business English majors, providing comprehensive and practical support for teaching. This includes purchasing teaching materials and sharing resources. Additionally, the co-construction of teaching materials and resources should be continually adjusted and updated to keep pace with market demands and industry trends.

Building a Team of Teachers and Teaching Teams: Ensuring teaching quality and improving the practical application skills of business English students requires training teachers through school-enterprise cooperation and selecting excellent talents to create a conducive learning environment. This model enhances the specialty's practical application level and ensures its effectiveness in real-world scenarios. Both schools and enterprises can improve the teaching and practical abilities of teachers and teams through training programs and practice bases, fostering common development through strengthened cooperation and exchanges.

Establishing Practice Bases and Career Development Platforms: Schools and enterprises should consider the actual needs of practice and enterprises when building practice bases and career development platforms. This collaboration provides students with realistic internship opportunities and better career development platforms, helping them improve their practical abilities and professional qualities, thereby enhancing their employment competitiveness. Additionally, it promotes deeper cooperation

between schools and enterprises, providing strong support for the continuous development and innovation of the business English discipline.

In summary, the implementation of curriculum co-construction requires joint efforts from schools and enterprises to formulate relevant curriculum objectives and teaching plans, develop teaching materials and resources, build teaching teams, and establish practice bases and career development platforms. By co-constructing courses, comprehensive and practical support for business English teaching can be provided. This approach optimizes the professional structure of educational institutions, promotes the quality of personnel training, and enhances the effectiveness of school-enterprise cooperation.

3. Innovative Ideas of School-Enterprise Curriculum Co-construction Mode for Business English Major

The mode of college-enterprise curriculum co-construction for business English majors has gained significant traction in higher education in recent years^[9,10]. This cooperation model integrates business English teaching with practical business activities, enhancing students' practical application skills and employment competitiveness. It not only promotes in-depth cooperation between schools and enterprises but also supports and guarantees the development and innovation of the business English major. Additionally, it cultivates talents with international vision and business communication skills, contributing to the evolution of business English education. This section focuses on the innovative ideas of the school-enterprise curriculum co-construction mode for the business English specialty, offering a feasible path for curriculum reform.

(1) Practical Business Application

The innovation of the school-enterprise curriculum co-construction mode for business English majors is highlighted by its emphasis on practical business application. Traditional business English teaching often focuses solely on language knowledge, overlooking the application of business English in real business activities. The co-construction mode combines business English teaching with practical business activities through school-enterprise cooperation, emphasizing practical application. This approach allows students to enhance their language and practical abilities in immersive business scenarios, thereby improving their professional quality and employment competitiveness. It facilitates in-depth cooperation between schools and enterprises and provides robust support for the development and innovation of the business English major.

(2) Interdisciplinary Integration

Another innovative aspect of the school-enterprise curriculum co-construction mode for business English majors is its emphasis on interdisciplinary integration. Business English, as a highly applied language course, requires the integration of knowledge from business management, international trade, law, and other disciplines to cultivate business English talents with interdisciplinary knowledge and skills. This model enables students to learn relevant business management, international trade, and legal concepts through business English teaching examples, achieving interdisciplinary integration. This helps students understand the business environment and legal provisions while learning business English, better preparing them for practical work.

(3) Practical Operation

The innovation of the school-enterprise curriculum co-construction mode for business English majors is also evident in its focus on practical operation. Business English teaching needs to be closely aligned with practical business activities, guiding students to master business communication and cross-cultural communication skills. This model provides actual business activity backgrounds and business documents, allowing students to learn business English in simulated business scenarios, thus realizing practical operation. This hands-on approach helps students develop the necessary skills for effective business communication and negotiation.

(4) Interactive Communication

The innovation of the school-enterprise curriculum co-construction mode for business English majors is further reflected in its emphasis on interaction and communication. This model facilitates positive interaction between students and enterprises. Students can pose questions and offer suggestions to enterprises during the course, while enterprises can provide better business English practice cases based on students' feedback. This interactive communication mode promotes deeper cooperation between students and enterprises, allowing students to acquire practical business experience and skills.

The innovations in these four aspects of the school-enterprise curriculum co-construction mode for business English majors effectively enhance students' language proficiency in business scenarios. They help cultivate business English talents with interdisciplinary knowledge and skills. Moreover, the model emphasizes practical operation and interactive communication, helping students understand the relationship between business English and actual business activities, master language application skills in real business contexts, and promote in-depth cooperation between students and enterprises.

4. Exploration on the Co-construction Model of Business English Curriculum between School and Enterprise

In the teaching of business English major, the mode of curriculum co-construction between colleges and enterprises has become an important innovative education mode. Through the cooperation between schools and enterprises, this mode combines business English teaching with practical business activities and effectively improves students' language practice ability in business scenarios. This section will discuss in detail the exploration of the school-enterprise curriculum co-construction mode for business English majors, including the determination of cooperation mode and content, the establishment of cooperation and coordination mechanisms, the innovation of teaching staff and methods, and the evaluation and optimization of curriculum effectiveness.

First of all, in the exploration of the school-enterprise curriculum co-construction mode for business English majors, it is necessary for schools and enterprises to jointly determine the cooperation mode and content. Schools can determine the mode and content of cooperation according to the actual needs and teaching resources of enterprises. In this mode, enterprises can provide the background of actual business activities and business documents, allowing students to learn business English in simulations of real business scenarios, thereby improving their practical application ability. Additionally, in the exploration of the school-enterprise curriculum co-construction mode for business English majors, it is essential to establish cooperation and coordination mechanisms to ensure the smooth development of the curriculum. By signing cooperation agreements, schools and enterprises can clarify their respective responsibilities and obligations, establish communication channels, and strengthen cooperation management and coordination.

Secondly, in the exploration of the school-enterprise curriculum co-construction mode for business English majors, attention must be paid to the innovation of teaching staff and teaching methods. This mode requires teachers to possess knowledge and skills in both business English and practical business activities, necessitating continuous improvement in teaching quality and innovation ability to meet societal needs for business English talents. Teachers need to focus on innovating curriculum design and teaching methods, encouraging students to explore the background of actual business activities, actively participate in business English practice, and improve their practical application ability.

Finally, in the exploration of the school-enterprise curriculum co-construction mode for business English majors, it is necessary to evaluate and optimize the curriculum effect. Schools and enterprises can evaluate and improve the course effect through questionnaires and field visits, continuously enhancing teaching quality and students' competitiveness in employment. Only on the basis of thorough exploration and practice can the school-enterprise curriculum co-construction mode for business English majors fully leverage its advantages and cultivate high-quality business English professionals.

Therefore, the following points should be emphasized in the exploration of the school-enterprise curriculum co-construction mode for business English majors:

Schools and enterprises should clarify their respective responsibilities and obligations, and establish communication channels and coordination mechanisms to ensure effective curriculum development.

Teachers should continually improve teaching quality and innovation, focus on curriculum design and innovative teaching methods, and encourage students to engage in practical business activities.

It is necessary to evaluate and improve the course effect continuously to enhance teaching quality and students' employment competitiveness.

In summary, the exploration of the school-enterprise curriculum co-construction mode for business English majors requires cooperation and coordination between schools and enterprises, improvement of teachers' innovative ability and students' practical application ability, and continuous evaluation and optimization of curriculum effect. The successful practice of

this mode will help cultivate more talents with business English communication skills and practical application abilities for society, promoting the development of the business English specialty.

5. Conclusion and Prospect

This study explores the college-enterprise co-construction model of business English curriculum, emphasizing the importance of cooperation and coordination between schools and enterprises, the enhancement of teachers' innovative abilities, and students' practical application skills, as well as the continuous evaluation and optimization of the curriculum's effectiveness. The results indicate that the school-enterprise curriculum co-construction mode for business English majors can effectively improve students' language proficiency and practical application capabilities in business scenarios, providing an effective pathway for cultivating high-quality business English professionals.

In future research, scholars can delve deeper into the integration of teaching resources within the school-enterprise curriculum co-construction model for business English majors. Enhancing the cooperation and coordination mechanisms will allow for better utilization and allocation of teaching resources from both schools and enterprises. Additionally, further exploration on how to improve teachers' innovative abilities and students' practical application skills can be conducted to better meet societal demands for business English talents.

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Influence of Situational Teaching Method on Improving Primary Students' Interest in English Learning: A Case Study of — Grade Six Students in Zhangjiakou Weihua Primary School

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Abstract: In this paper, the “situational teaching method” is a teaching method teachers apply to achieve the teaching goal and accomplish the teaching task by setting the situation. Theoretically, this method can help to arouse the enthusiasm of teachers and students to participate in class teaching, stimulate and promote students' interest in learning, and accomplish teaching efficiency effectively. This paper reports on a study that examined the implementation of situational teaching method in a primary English class. Based on questionnaire survey and data analysis of experimental class and control class, the author attempts to explore the effectiveness of situational teaching method on the improvement of pupils' interest in English learning, taking Grade six students of Weihua Primary School as the research object. The effectiveness of the situational teaching method is verified by the results. It is hoped that the results will contribute to the practice and reform of English teaching in primary schools.

Keywords: Situational Teaching Method; Pupils; Interest in English learning; Influence

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1. Introduction

Since the reform of basic education curriculum in China, English teaching has made great progress. The teaching concept of basic education is quality education. It is the curriculum goal of constructing the curriculum framework for the students' lifelong development and comprehensive language use ability. Based on the development of affective attitude, learning strategies and cultural awareness, students are trained to use English as a comprehensive language. Its basic idea is to advocate taking the student as the main body, and with student's life is closely linked.

Weihua Primary School is to be joined with another school, and its teaching scale and teaching quality are not as good as those of Lu Xun Primary School in Zhangjiakou City. ^[1]In English classroom teaching, teachers' sense of situational teaching is not strong. Most teachers still adopt the most traditional teaching method, and few teachers use situational teaching. In order to check the students' mastery, the teacher usually tests the students with the form of reading proficiency. In order to achieve their teaching goals, they ask students to read mechanically, and there is no emotional communication ^[2]. In traditional English teaching, the classroom atmosphere is dull. The lack of interaction cannot stimulate students' interest in learning and fail to complete the teaching goal of cultivating students' ability of oral English expression. Under such circumstances, educators must change their teaching methods.

Nowadays the development of the situational teaching method in our country is entering into a new stage of teaching innovation and rapid expansion and increasingly becomes the important engine to stimulate the students' demand, promote the upgrading of the traditional education and develop modern education service industry.^[3]In recent years, under the circumstance with vigorously promoting the integration of information technology and education by our government, the education reform accelerate the pace to develop the information technology as well as the demand of the teaching of the teacher is increasingly becoming strong. Many private and public schools have achieved good achievement in developing situational teaching method. Many training institutions also use situational teaching methods to offer a variety of courses, for example: situational talking.^[4]And the situational talking in our countries are emerging with different distribution patterns. There are face-to-face courses and distance education. The situational teaching method, as a new type of teaching method influences many aspects of the students and has the crucial meaning for the development of numerous students and schools. At the same time, it also brings some impact and challenges to the traditional teaching.^[5]

In China's current development, so to speak, situational teaching method is an opportunity and also a challenge. Therefore, we need to urgently analyze the cause of the our education's development bottleneck of the situational teaching method in practice, and summarizes the problems which are need to be solved during the situational teaching method further development by learning the successful experience of domestic and foreign.^[6]At the same time, the application range of our country current situational teaching method is single, and also we need to urgently expand the scope of situational teaching method through the analysis of the situational teaching method successfully applied field, especially in the class. Given that condition, this thesis will propose some referenced suggestion and this is another innovative point and hopes to make some help to the development and further study of situational teaching method.^[7]

2. Literature Review

2.1 Domestic Research

In our country, situational teaching method is not the product of modern times, but has been since existing in ancient times. It inherits the heuristic teaching method of Confucius, who is the most famous educator in our country. At the same time, it means that it belongs to a kind of teaching situation, which is difficult to realize that if you really want to understand without taking action. Therefore, teachers need to give students timely inspiration, so as to help students learn better.

In China, the study of English situational teaching method has started since the 20th century. Zhang Shiyi, the first applied expert of foreign language teaching method in China, is mainly based on the research of situational teaching method. He has been studying on his teaching and research since the 1920s, and gradually developed the theory of English situational teaching. He thinks that.

The essence of language is the human organism for a response to the situation, so the essence of learning language problem is to learn a language with the ability to respond to situations and response English learning is unsatisfactory, the main reason is that we avoid situations and only in a narrow range around to the language.^[8]

He pinpointed: "In the practical teaching, apply the situational principle to the English teaching materials, and make full use of the phonograph, the slide, the film and other creation scenarios".

Brown points out that language communication should adopt the strategy of how words, according to the specific situation, rely on language specific message; it becomes a prerequisite for both sides communicate. The word "situation" requires characters, events, field, time, points, circumstances, context and social text, and the collection of all kinds of cattle in the inner and outer layers. In the process of foreign language teaching, students need to understand the specific situation in the real language situation or simulation situation.

Li Jilin believes that situational teaching method is "from the dialectical relationship between emotion and circumstance, emotion and speech, emotion and reason, emotion and all-round development, creating a typical scene and arousing children's warm emotions". A teaching model combines emotional and cognitive activities. The starting point and practical entry point of the theoretical of situational teaching are situation. From the point of view of subject teaching, "situation" is actually a subject teaching and living environment which is optimized by emotion regulation as a means to promote the student's active participation and overall development.^[9]

The core of situational teaching is “situation”, which places the important aspects of students’ interest, specialty, ambition, attitude, values and so on in the teaching of subject. Through the creation of various vivid and concrete living environments, it has been drawn closer the distance between subject teaching and students’ real life, and makes the dead knowledge a living life, open up a realistic way for the students to participate actively and develop their own initiative.

In recent years, many experts and scholars have carried out research on situational teaching, which has brought great enlightenment to English teaching. Chen is based on the students’ curiosity, their ability to understand and accept new things. And they are easy to be attracted by interesting things to carry on the situational English teaching in primary school, and put forward three kinds of situational teaching methods: “life style”, “question type” and “interesting type” teaching situation. Situation teaching method can better lead students into the classroom, bringing them into the atmosphere of English learning, improving the efficiency and quality of English classroom teaching. In front of the students, teachers create a wholesome teaching atmosphere and show the teaching contents intuitively, vividly. Through his own practical teaching experience in English teaching, Sun illustrates the specific content of the textbook content of situational teaching in English teaching. In the “silent” into a living object, full of sound and color language scene, boring words, grammar, sentence, in a real, three-dimensional environment in English that accelerates language internalization. This teaching form is more in line with the psychological characteristics and learning rules of primary school students. It can attract students to actively participate in activities and enhance their understanding and knowledge, so as to achieve the purpose of learning for practical purposes. Li Dongsheng thinks that.

The use of situational teaching in primary school can not only activate classroom atmosphere, stimulate students’ interest in learning, forge students’ language ability, but also cultivate students’ thinking ability and space imagination ability, make students learn in a relaxed and pleasant environment, develop good learning habits, produce language internalization, and learn English, thus laying a good foundation for students to learn English further.

Du indicates in the paper that interest is the dynamic mechanism of learning activities, which can effectively keep students in active and excited state and actively participate in teaching activities. Yao points out that.

The difficulty of situational creation is mainly reflected in two aspects: on the one hand, teachers should formulate an optimal training goal for students’ intelligence development in the “recent exhibition area”. On the other hand, the difficulty of creating problem situation should be hierarchical.

Teachers should create problem situations of different difficulty and give consideration to students with different cognitive levels, so that each student can find the problem situation in his or her “proximal development area” and think about it, and explore and improve him or her.

From the above findings, we can see that the situational teaching research design has its own characteristics, but the research on teaching is mainly aimed at domestic English learners, so the conclusion is more consistent with the characteristics and needs of domestic learners.

2.2 Research Abroad

The most widely accepted definition of situational teaching and learning is put forward to a national research project, funded by the office of education and adult education and the office of national school work. Situational teaching and learning does not mark a new approach to teaching and learning, but rather combine different but related methods to form a system that has the following characteristics:

a. Link the learning content to the learner’s experience; b. Encourage students to learn actively; c. Be able to give students the opportunity to learn independently; d. Encourage the construction of the meaning of individualization from individual experience and collective experience; e. To evaluate the results of learning in real situations and to explain the meaning of pluralism from an individual’s perspective. These features provide a conceptual basis for situational teaching and learning and help to define it.

Early foreign educators, Socrates, Rousseau, Dewey and Sue Home Linksys have all advocated and practiced situational teaching. As the word, “teachers dedicated the whole soul to the child”. They have left the experience and thinking of situational teaching in their educational treatises and teaching practice. Socrates’ “midwife”, is through the conversation

between teachers and students to create a special situation to make students independent thinking to solve the problem, and the essence of this kind of teaching method is seemingly simple positive thinking to inspire students' activities, then gradually developed into embryonic Situational teaching method. In his famous educational work, the enlightenment thinker Rousseau records examples of teachers who purposefully use the situation of nature to lead their students to learn and think. In this book, there is a saying: "The problem is not to teach him all kinds of learning, but to cultivate his interest in learning, and when that interest is fully developed. Teach him the method of learning to ask. During this time, he will gradually develop the habit of paying lasting attention to the same thing." There are three key words in Rousseau's passage, "interest, method, habit," cannot be separated from these words. Without interest, there will be no motivation. Dewey first puts forward the use of the word "situation" in the sense of pedagogy. He thought that "thinking originated from the situation of direct experience", which is an important factor in the development of thinking. The fundamental reason for the failure of traditional education fails to set up the situation of thinking for the students.

We advocate that there must be an actual situation of experience as the beginning of thinking," he puts forward five steps of exercise thinking: "The problem is the situation in all aspects, the assumption is made and the inference is made, and the test is actively carried out.

The child grows between the individual and the environment, that "the prepared environment" is the core of education, it is composed of two parts: one is the physical environment, another is a human environment.

In conclusion, the study of language teaching by foreign scholars shows that, in most cases, teaching in a certain situation is beneficial to the students' language learning. In classroom teaching, due to students' individual differences, teachers should use various teaching methods comprehensively, combined with context to teach, and help students accurately grasp the meaning and usage of new words, and make language teaching more effective. Western scholars have realized that it is easy to disconnect the learners' learning and living environment by inculcating knowledge as symbols, when they have established a belief and a way of thinking about the symbols they recognize. However, setting up a situation can support learners' learning goals and promote their learning (Leigh 4). From the middle of 1980s to the present, with the study of situational cognition and situational learning theory, western situational teaching has been continuously developed and perfected.

2.3 Summary

The above research has mentioned the benefits of the situational teaching method, but rarely focuses on the impact of situational teaching method on primary school students. This paper attempts to do research into it.

2.4 Situational Teaching Method and Its Effect

The theory and practice of situational teaching has a long history. In different periods educators have different understanding and practice of situational teaching, especially until 21st century. People pay more and more attention to teaching and education. With the implementation of the new curriculum reform in China, basic education requires the overall development of students and quality education, and the application of situational teaching in various disciplines is gradually increasing.

Situational teaching is that in the course of teaching, the teacher has the goal of introducing or creating a vivid scene with certain emotion, so as to cause the students to have a certain attitude experience, thus helping the students understand the teaching materials and enable the students to develop their The core of the situational teaching method is to stimulate students' emotion. Situation teaching, it is in the refining and further processing of society and life after the influence to the students. Such as role models, vivid language descriptions, in-class games, role-playing, poetry recitation, painting, gymnastics, music appreciation, tourism, etc., are all in the context of the concrete image, and there must be a subtle implication.

Situational teaching method encourages teachers to conform to the characteristics of teaching materials. The students' age background and living environment create fresh and rich language situations, and the teaching contents are placed in a larger language environment, so that students can master the language in the experience situation and use it in the actual situation. However, there are many problems in the application of situational teaching method. In the modern society, with the rapid development of science and technology, it is even more necessary to reflect the new technology and concept in situational teaching in time. The situational teaching in this study is a teaching method. Teachers apply achieve the purpose of teaching,

to create a certain scene or atmosphere, cause students' emotion and interest so that students can understand and grasp exactly what they want to learn.

3. Research Design

The study mainly adopts a questionnaire survey. This chapter first defines two research questions to be discussed, then introduces the subjects and instruments. The specific research process, how to operate one by one according to the steps, and finally the method of data analysis are described in detail.

3.1 Research Questions

- a. What do students and teachers know about situational teaching?
- b. Can situational teaching enhance students' interest in English learning? If so, how can we improve it?

3.1 Subjects and Instruments

3.1.1 Subjects

Two classes of grade six in Yingcai primary school were recruited as subjects for this study during this semester. The total number of students in each class is 37.

3.1.2 Instruments

In order to investigate the interest of students and teachers in situational teaching method, two questionnaires and test papers were administered to each of subjects.

3.1.3 Procedures

Two classes were pretested in October 2017. The test paper was carried out at the same time at the beginning of the October 2017. The results pretest have proved that there was no significant difference in English scores between two class.

The present study adopts the method of comparative study in teaching. The control class took the normal courses. And in the experimental class, according to the students' life situation, teacher used situational teaching method by multimedia participation and work in pairs. In the experimental class, according to the specific curriculum, the teacher designed 1-2 periods in each unit to use the situational teaching method.

Before the class began, teacher should understand their life experience. In *Practical Guide to the Teaching of English as a Second or Foreign Language*, there are a lot of ingredients related to the daily life of the family, such as family members, fruits, stationery and so on. Teachers should be good at understanding and collecting the life materials of students' interest, actively creating an English learning environment in class, so that students will be willing to participate in the classroom and use language in real situations. Teachers should actively develop the resources other than teaching materials, and make effective use of situational teaching methods to carry out teaching, such as books, newspapers, audio and video materials, network video, etc. We advocate the origin of life education because we oppose Tao Xingzhi's behavior of "reading dead books, rote reading, and reading dead".

Teachers should also fit students' life in the lead-in, and vividly import them, arousing their thirst for knowledge. At the same time, teachers must realize that students are the resources of teaching (Wilkins 18), and students can learn from the understanding of their own life. Teachers can grasp the students' individuality and common characteristics, designing different import methods, such as: play a game or sing a song, etc. As long as students are placed in a situation of interest, they can effectively stimulate their desire to learn and express themselves, acquiring English in a subtle way, and internalize the external book knowledge into their own knowledge accumulation.

During the past three months, the control class took the normal courses. After the experiment, the post-test was conducted. Through experiments and research, the achievements of experimental class were promoted obviously than those of the control class.

4. Results and Analysis

Based on the analysis of pre-test scores, the author employed SPSS24 to explore the effect of situational teaching method on students' English achievement. Moreover, this paper analyzes the students' and teachers' views on situational teaching methods by means of questionnaire analysis.

4.1 Pre-test Results and Analysis

The pre-test paper is a simulated test paper in the next year of the sixth grade of the PED version. The test paper was completed in 90 minutes, with a total of 100 points. The teacher marked papers. SPSS was employed for data analysis. The independent sample t-test was carried out. If there are significant differences in the results of the two classes, would show that the students' levels of the two classes were not equal. Under such circumstance, they would not be suitable for the study.

The results of the analysis are shown in Tables 1 and 2.

Table 1 Descriptive statistics of pre-test of the two classes

Class	N	Mean
1	37	74.88
2	37	74.56

Table 2 T-test results of independent samples of pre-experimental scores of two classes

Independent samples Test									
	Lewene's Testfor Equality		T-test for Equality of Means						
	F	Sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error or difference	lower	upper
Equal	0.05	0.819	0.3	92	0.765	0.34	1.137	-1.91	2.591
Variances									
Assumed									
Equal			0.3	91.94	0.765	0.34	1.133	-1.91	2.291
Variances									
assumed									

Table 1 shows the descriptive statistics for the first two classes of the experiment. It can be seen that the mean (74.88) of Class 1 is similar to that (74.56) of Class 2.

The results of the independent samples T-test are given in Table 2. The test of homogeneity of variance F-measure is 0.052, the corresponding P value is 0.819 greater than 0.05. A result in equal variance under the assumption of Fang Chaqi, the T value was 0.300. The probability is 0.765, much higher than 0.05, indicating there was no significant difference between two classes. Therefore, the first class was arranged to be the experimental class, while the second class, the control class. Traditional teaching method was adopted in the control class, while the situation teaching method in the experimental class.

4.2 Post-test Results and Analysis

In the semester, students studied the same teaching materials. At the end of the experiment, the students in the control class and the experimental class took part in the final examination. It was found that the scores of the experimental class and the control class were different.

The results were obtained through spss24 analysis.

Table3 Description statistics of post-test of the two classes

class	N	Mean
experimental class	37	82.98
control class	37	77.99

Table 3 gives two classes' average score of post-test results. It shows that the average score of the control class is 77.99 points, and that of the experimental class is 82.98 points. Obviously, the experimental class' grade is higher, which proves that situational teaching method goes well.

Table 4 The results of independent sample T test of the results of the experimental class and the control class

Independent samples Test									
	Lewene's Testfor Equality		T-test for Equality of Means						
	F	Sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error or difference	lower	upper
Equal	7.201	0.09	-7.9	92	0	-6.915	1.871	-8.65	-5.184
Variances									
Assumed			-7.9	78.66	0	0.34	1.133	-8.65	-5.18
Equal									
Variances									
assumed									

Table 4 shows the results of the independent sample T-test of the post-test grade of the two classes. The F value of the homogeneity test of variance is 7.201, and the corresponding P value is 0.009, which is less than 0.05. It can be considered that the variance of the difference between the two classes is not equal. When the assumption of homogeneity of variance is not established, the T value of the score comparison is -7.935, and the accompanying probability is 0.000, which is less than 0.05. That shows there is a significant difference between the two classes. In another word, after the experiment, there were significantly different in achievement between the experimental class and the control class. Achievements of the experimental class were improved obviously due to the application of situational teaching method, which has proved that the situational teaching method had an impact on the students' English learning, and can greatly improve the students' English academic performance.

4.3 Analysis of Questionnaires

4.3.1 Student Questionnaire

The author sent out 36 questionnaires and recovered 36 (P41 for more details). All 36 questionnaires are valid.

Table 5 Statistics of students' questionnaire results

Question number \ Option	A	B	C	D
1. Does the teacher bring cards, wall charts, objects, stick figures, or homemade teaching AIDS to class?	28	6	3	0
2. Does the teacher use computers, tape recorders, projectors, etc., in class?	20	9	7	1
3. Does the teacher sing or listen to English songs or nursery rhymes in class?	17	10	9	1
4. Does the teacher make rich expressions, gestures, movements, sing or dance during the class?	18	12	6	1
5. Do you like to play English games?	27	5	5	0
6. Will the teacher lead you to play games or have group competitions in class?	16	13	6	2
7. Do you receive encouragement from your teacher in class (verbal compliments, nods and smiles, etc.)?	15	14	5	3
8. Have you ever been criticized by a teacher in class?	3	5	18	11
9. Do you like to tell stories or impersonate characters in English?	22	10	3	2
10. Do you have a chance to act out the situations in the text in class?	17	10	5	5

Question1 is the investigation of teachers' use of visual aids in teaching. From the survey results, we can see that some students think that teachers often use visual aids in teaching. This is easy for students to understand and satisfy students' curiosity, so they are widely used in teaching.

Questions 2 to 4 make good use of multimedia, ballad and body language in the teaching process to make the teaching lively and interesting, so does the sixth graders, who are interested in the contents of the class and then actively learn the vocabulary and sentences.

Question 5 is a survey of students' interest in the game, obviously most students love to play games. Question 6 shows that the teachers can use competition, because the students have different basement, so the results are so vary. I suggest that teachers should do games and competitions at the start and in the end of the course. Let students to prepare in advance, and eventually achieve the mastering of knowledge.

Question 7 and 8 are the survey of teachers in classroom evaluation, teachers pay more attention to the praise to students. Because most of the students reported that teachers often praise themselves in the classroom in the survey. This is a people-oriented performance for student development. Compared to praise, criticism to students is very few. Only a very small number of students are often criticized.

Question 9 is a survey of students' liking in English situational teaching. Most students like English storytelling or role-playing. Question10, half of students are often able to do role-play or tell stories. We can see that teachers pay more attention to training students' oral expression ability in class.

4.3.2 Teacher Questionnaire

In order to understand the English teachers' opinions on Situational Teaching Method, the author sent out 10 questionnaires to all the 10 English teachers involved (see P44), and 10 copies of questionnaires are all effective.

Table 6 Statistics of teachers' questionnaire results

Question number \ Option	A	B	C	D	E
1. What do you know about situational English teaching in primary schools?	5	3	2	0	\
2. What is your attitude towards situational teaching?	6	3	1	0	\
3. What do you think of the situations provided in the current English textbooks for primary schools?	4	3	3	0	\
4. What do you think is the most important reason for the difficulty of creating language situations?	2	2	3	2	1
5. You create language situations to teach while preparing lessons.	2	4	2	2	0
6. In addition to the textbook, are there any other materials that you would gather for context creation?	2	4	3	1	\
7. In classroom teaching, do you use physical objects or homemade teaching AIDS to create language situations that fit the teaching content?	3	2	2	2	\
8. Do you use pictures, audio, video and other means to create language situations in classroom teaching?	3	2	2	2	\
9. In classroom teaching, will you create language situations based on students' real life?	3	2	2	2	\
10. In classroom teaching, do you use body language, expressions, gestures, movements and other forms to create situations that inspire students to think?	4	3	2	1	\
11. In classroom teaching, do you ask students to role-play according to the textbook situation or self-created life situation?	5	3	2	0	\
12. In the classroom teaching, will you make simple language communication according to the actual situation in life?	5	3	2	0	\
13. In classroom teaching, do you create problem situations to inspire students to think?	5	2	3	0	\
14. In classroom teaching, will you create language situations based on students' answers and performance to guide and inspire students to do things with language?	1	4	2	3	\
15. Do you think students are interested in the various teaching situations created in the classroom?	3	2	2	2	\
16. Do you use situational teaching methods to promote the understanding and use of words and sentences in books?	4	6	0	0	\

From the questionnaire, we can see that questions 1 and 2 reflect teachers' understanding of the situational teaching method, and most of the teachers in our school have received formal education, have the professional knowledge of situational teaching method. However, in the class, they still prefer using the traditional teaching method.

Questions 3 and 4 are around the current version of the difficulties in the teaching material and teaching. In the daily teaching, more difficulties appear. Due to student's poor proficiency and different learning ability, the teacher cannot satisfy the need of each student in teaching. Besides, teaching time is tight, the teacher has no time and energy to elaborate the course.

Questions 6-14(shadows) involve the way of creating the situation to fit students practice, and expressing the situation. According to the teachers' teaching experience occasionally create situations, guide and inspire students.

Questions 5-16 investigate the teachers' attitudes and effects of students' participation in situational teaching. The students are interested in the different situations created by the teachers, and are willing to participate in the situational activities, which can help to promote students' understanding and application of book knowledge. Situational teaching conforms to the requirements of the new curriculum, fully mobilizes the students' learning enthusiasm, encouraging them to study. The good teaching result can be obtained by setting the appropriate situation according to the students' age characteristics and psychological characteristics, so as to arouse the students' emotional resonance.

5. Conclusion

The paper studies the impact of situational teaching method on improving primary students' interest in English learning. The author chose two parallel classes of Grade six, in Zhangjiakou Yingcai primary school, one as experimental class and the other as control class. The two classes were pre-tested and past-test, and then the results of the two classes were analyzed through SPSS. Meanwhile the author administered questionnaires to students of these two classes and English teachers in that school. Based on the empirical study, data analyses were done, and the effectiveness of situational teaching method on improving primary students' interest in English learning has been verified.

The author finds out the theoretical basis of situational teaching by consulting materials, and thus has a new recognition of situational teaching. Through these questionnaires, the author finds out that situational teaching method has the following advantages. 1. Situational teaching makes the classroom pleasant and energetic. So that students like English classroom. 2. Situational teaching pays attention to the all-round development of students and provides students with suitable situation. 3. Situational teaching provides students with more opportunities for linguistic practice and improves students' comprehensive language competence.

As to the research process and methods of this study, there are still some limitations. 1. Concerning the randomness of the subjects in the questionnaire, actually the investigation process is affected by situation.

2. Different forms of situational teaching in class, due to certain time constraints, cannot be listed. 3. The results of the survey may also be protected by some psychological tendencies of teachers or students, so that the results of the questionnaire may be biased toward the positive.

It is suggested that future study can be about the content of situational creation, and different forms of situational teaching and the diversity of situational teaching evaluation, and teachers' self-promotion.

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Construction Paths for Honesty Education in University Accounting Majors from the Perspective of Course Ideology and Politics

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Abstract: The construction of accounting majors in Chinese universities is at a critical period of transformation and upgrading in the new era, and the comprehensive advancement of honesty education in accounting has become an intrinsic requirement for the high-quality development of the accounting profession. This paper discusses the significance of conducting honesty education in accounting majors in the new era. It addresses current issues such as the lack of shaping accounting honesty values, missing content related to ideological and political education in courses, and the need to strengthen the faculty. Strategies proposed include fostering a sense of integrity, integrating ideological and political education into courses, and enhancing teacher team construction. These strategies aim to provide references for promoting the comprehensive development of honesty education in accounting majors at Chinese universities.

Keywords: Higher Education; Accounting Major; Ideological and Political Education in Courses

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1. Introduction

With the ongoing advancement of economic globalization and informatization, accounting, as an important tool for business management and decision-making, has a direct impact on the healthy development of the market economy due to its standardization and transparency^[1]. In recent years, a series of accounting misinformation incidents at home and abroad have attracted widespread attention from all sectors of society. Accounting misinformation not only severely harms the interests of investors and the public but also undermines market fairness and justice, shaking the foundation of societal integrity. Therefore, integrity education has become an important topic in the teaching reform of accounting majors in higher education institutions. The report of the 20th National Congress of the Communist Party of China points out that the fundamental issues of education are whom to train, how to train them, and for whom^[2]. Thus, in the new era, university students are required not only to possess solid professional knowledge and skills but also to exhibit good moral qualities and a sense of social responsibility. Therefore, while cultivating students' professional capabilities, accounting majors in universities should also focus on fostering students' awareness of integrity and professional ethics.

As an important direction of educational reform in universities in the new era, ideological and political education in courses aims to integrate ideological and political education throughout the professional course teaching process, achieving comprehensive education in all members, all processes, and all aspects. In 2020, the Ministry of Education issued the

‘Guidelines for the Construction of Ideological and Political Courses in Higher Education Institutions,’ which further clarified the goals and key content of ideological and political education in courses, establishing that ‘the construction of ideological and political courses should focus on comprehensively improving the capability of talent training’^[3]. Integrating ideological and political education into the integrity education of the accounting major is an innovation of the traditional accounting education model and a necessary requirement for improving the quality of accounting education. By combining ideological and political education with courses, it is possible to integrate socialist core values and professional ethics standards into accounting courses, helping students to establish correct values and professional perspectives, and enhancing their sense of social responsibility and professional ethics awareness.

This paper explores the construction paths of integrity education in university accounting majors from the perspective of ideological and political education in courses, aiming to provide new ideas and methods for integrity education in university accounting majors and to promote the high-quality development of accounting majors in universities in the new era.

2. The Significance of Conducting Honesty Education in University Accounting Majors in the New Era

2.1 The Intrinsic Requirement for the High-Quality Development of University Accounting Majors

Honesty education is an inevitable requirement that aligns with national policy directions. General Secretary Xi Jinping has repeatedly emphasized the need to strengthen the ideological and political education of university students, cultivating socialist builders and successors who are both morally and intellectually qualified. As an important part of professional education, honesty education is not only necessary for cultivating the professional qualities of accounting students but also an important embodiment of implementing national education policies. By deeply conducting honesty education, universities can better implement the requirements of the Central Committee and cultivate high-quality talents that meet the needs of national development.

Accounting honesty education is a necessary means to maintain social and economic order^[4]. Accounting information is an important basis for economic activities, and its authenticity and reliability are crucial for the healthy operation of the market economy. Under market economy conditions, a lack of honesty can lead to erroneous business decisions, causing economic losses, disrupting the normal operation of market mechanisms, and reducing public trust in the market economy. University accounting major honesty education can cultivate students’ rigorous and honest professional attitudes, effectively prevent and reduce the phenomenon of distorted accounting information, and provide strong support for maintaining social and economic order.

2.2 The Essential Meaning of Cultivating Morally and Intellectually Qualified Accounting Talents

Honesty education is the core of cultivating the professional ethics of accounting talents. Professional ethics is an important part of the accounting profession, influencing the professional behavior and decisions of accounting practitioners. Honesty, as the foundation of professional ethics, is a basic principle that accountants must adhere to throughout their careers. Implementing systematic honesty education in universities can effectively enhance students’ moral cognition and moral behavior abilities, enabling them to make choices that meet professional ethical requirements when faced with ethical dilemmas, uphold professional integrity, and maintain the authenticity and reliability of accounting information.

Honesty education is an important content for improving the comprehensive quality of accounting professionals. In the context of the new era, the accounting industry faces increasingly numerous challenges and complex business environments. Practitioners need to possess professional skills as well as good professional ethics and comprehensive qualities. University honesty education can help students establish correct professional ideals and ethical concepts, improve their comprehensive qualities and professional adaptability, and enable them to adhere to professional ethics with a high sense of responsibility and mission, providing high-quality accounting services to society.

2.3 Effective Measures to Eliminate False Accounting Information

Honesty education is a guarantee of the authenticity of accounting information^[5]. Honesty education in university accounting programs can help students establish a firm concept of integrity, enabling them to adhere to principles and uphold professional ethics in their future careers, and avoid any form of financial fraud. Honesty education enables students to uphold their

ethical bottom line when facing complex professional environments and various temptations, ensuring that the accounting information they provide is true and reliable, thereby providing a solid foundation for the economic decision-making of enterprises and society.

Honesty education helps establish a sound system of professional ethics. The system of professional ethics in accounting is the cornerstone of the healthy development of the accounting industry, with integrity being the core element of this system. Through honesty education, universities enable students to systematically learn and understand the basic principles and requirements of accounting professional ethics, making integrity a guiding principle of professional behavior that permeates all aspects of accounting work. The establishment of a professional ethics system helps students consciously uphold professional ethics after entering the workforce, and it can foster a good ethical atmosphere in the entire accounting industry, reducing and eliminating the occurrence of false accounting information.

3. Current Issues in Honesty Education for University Accounting Majors

3.1 Lack of Shaping Accounting Integrity Values in University Accounting Majors

The curriculum design of accounting majors does not emphasize honesty education enough. Most universities focus more on imparting professional knowledge and skills in their accounting courses while neglecting the importance of professional ethics education. Honesty education is often limited to certain ethics courses or electives, lacking systematic and in-depth approaches, leading to students having a superficial understanding of accounting integrity values, which they cannot effectively apply in their professional careers.

Universities also lack sufficient resources and environmental construction for honesty education. Many universities do not allocate enough resources to integrity education in accounting majors, lacking specialized teaching materials and resources for honesty education, which affects the effectiveness of teaching. Additionally, the campus environment and cultural atmosphere play an important role in shaping students' integrity values. Some universities have shortcomings in this area, failing to create a good culture of honesty, resulting in students lacking a positive environment for honesty education in their daily studies and lives, which hinders the effective enhancement of their integrity awareness.

3.2 Missing Ideological and Political Education Content in Accounting Integrity Education

The integration of ideological and political content in course design is limited. Despite the repeated emphasis on the importance of ideological and political education by the state and educational authorities, in many universities, ideological and political content in accounting majors is seriously marginalized, lacking systematic and comprehensive integration. Consequently, students find it difficult to receive ideological and political education influences and guidance through their professional courses.

The evaluation and assessment mechanisms for ideological and political education are incomplete. The effectiveness of honesty education and ideological and political education needs to be tested and feedbacked through scientific and reasonable evaluation mechanisms, and many universities have obvious shortcomings in this regard. In the student performance evaluation system, the assessment of ideological and political education content is weakened, leading to students not paying enough attention to ideological and political education in their learning process and lacking motivation for proactive learning and internalization. Without a scientific evaluation and feedback mechanism, the implementation effect of ideological and political content in courses is difficult to be truly reflected and continuously improved.

3.3 Strengthening the Relevant Faculty

Teachers' professional qualities and educational backgrounds are insufficient. Some teachers engaged in accounting teaching, although possessing high levels of professional knowledge and skills, lack systematic training and practical experience in honesty education. They find it difficult to combine theory with practice in honesty education, and their teaching content is single and lacks depth and breadth, making it hard to stimulate students' interest and resonance. Some teachers also have deviations in their teaching philosophy, overly focusing on imparting professional skills while downplaying the importance of honesty education, which is not conducive to the sustainable development of accounting honesty education.

Teachers need to improve their abilities in ideological and political education. Honesty education for accounting majors requires organically integrating ideological and political content into professional teaching, which sets higher requirements

for teachers. Many teachers lack the necessary training and guidance, making it difficult to effectively combine ideological and political content with professional courses in actual teaching, resulting in unsatisfactory implementation effects of ideological and political education in accounting courses, which is not conducive to students' deep understanding and internalization of integrity values during the learning process.

Teachers lack innovation in teaching methods and approaches. Modern education requires teachers to continuously innovate in the teaching process, using diverse teaching methods to enhance educational effectiveness. Some teachers still adopt traditional lecture-based teaching methods in accounting honesty education, lacking interactivity and practicality, making it difficult to guide students in-depth thinking and practical application. The single teaching method seriously affects the effectiveness of accounting honesty education.

4. Paths for Constructing Honesty Education in University Accounting Majors from the Perspective of Ideological and Political Education in Courses

4.1 Establishing Awareness of Honesty and Strengthening the Shaping of Accounting Integrity Values

University accounting majors should strengthen the construction of a culture of honesty and create a strong atmosphere of honesty education. This can be achieved through campus publicity, themed lectures, and cultural activities to infiltrate the concept of honesty into all aspects of campus life, allowing students to subtly receive the influence of honesty education in their daily lives. Accounting majors can also set up honesty scholarships and model student selections to recognize and reward students who demonstrate high standards of honesty in their studies and lives, setting examples and guiding all students to learn from the best, fostering a good atmosphere of honesty.

University accounting majors should also focus on the practical aspects of honesty education, strengthening students' awareness of honesty in actual accounting work. During accounting internships and social practice, universities should cooperate with relevant enterprises and institutions to jointly develop and implement accounting honesty education plans. Through field visits, job experiences, and practical operations, accounting students can receive honesty education in real professional environments. Students are encouraged to adhere to professional ethics and honesty principles during practice, putting the learned concepts of honesty into action, thereby continuously consolidating and strengthening their values of accounting honesty.

4.2 Integrating Ideological and Political Education to Optimize the Content of Accounting Honesty Education

In terms of course design, universities should make honesty education an important part of the accounting curriculum system, ensuring that every course effectively conveys the concept of honesty. Honesty education content can be embedded in core courses such as accounting basics, financial management, and auditing, allowing students to deeply understand the importance of honesty in the accounting profession while learning professional knowledge. In the accounting basics course, case analysis can be used to show the serious consequences of a lack of honesty for enterprises and society, enhancing students' awareness of honesty. In the auditing course, teachers can introduce real audit cases to discuss potential honesty issues encountered during audits, cultivating students' ability to adhere to honesty principles in practice.

University accounting majors should establish and improve evaluation and feedback mechanisms by regularly assessing the effectiveness of accounting honesty education, collecting student feedback, and promptly adjusting and improving educational content and methods. The evaluation mechanism should include aspects such as students' academic performance, honesty behavior, and teachers' teaching effectiveness. Universities can use questionnaires, seminars, and other forms to understand students' true feelings and needs regarding accounting honesty education, ensuring the relevance and effectiveness of the educational content. Universities should also incorporate students' honesty behavior into the evaluation system for accounting studies, making it an important criterion for assessing the overall quality of accounting students and encouraging them to consciously adhere to honesty principles.

4.3 Strengthening Faculty Development to Enhance Teachers' Awareness of Accounting Honesty Education

Teacher training is an important means to enhance teachers' awareness of honesty education. Universities should regularly

organize teachers to participate in specialized training on accounting honesty education, including the latest theories on honesty education, teaching methods, and practical case analysis. Systematic training enables accounting teachers to master how to effectively integrate honesty education content into their courses, thereby enhancing students' awareness of honesty. Universities can also invite experts and scholars in the field of accounting education to give lectures and seminars, helping teachers broaden their horizons, update their knowledge structures, and continuously improve their ability to teach honesty education.

Universities should encourage teachers to proactively integrate honesty education content into their teaching. During lectures, teachers should combine accounting knowledge with various teaching methods such as case-based teaching and discussion to guide students to recognize the importance of honesty and consciously adhere to accounting honesty principles in their actual work. Teachers can use case analysis to show the harms of dishonest behavior in the accounting profession, guiding students to think about how to uphold honesty in their careers. Through discussions and role-playing, students can deepen their understanding and acceptance of honesty in an interactive setting, subtly cultivating their accounting honesty values in diverse teaching methods.

5. Conclusion

The construction of honesty education in university accounting majors is a systematic project that requires the joint efforts of schools, teachers, and all sectors of society. Only through collaborative efforts to improve and enhance honesty education can we cultivate more accounting professionals with high moral standards and strong awareness of honesty, contributing to the sustainable development of the social economy.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declared that they have no conflicts of interest regarding this work.

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A Study of College English Grammar Teaching Strategies Based on Interactive Teaching

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Abstract: In order to explore effective college English grammar teaching strategies based on interactive teaching in colleges and universities, this paper, based on interactive teaching theory, uses quantitative experimental research methods to conduct empirical research from three dimensions of curriculum and teaching material design, teaching design and evaluation methods. The results show that there is a significant difference in the learning evaluation scores between the experimental group and the control group, and the interactive teaching method has obvious advantages in college English grammar teaching. We should further strengthen the research and application of interactive teaching, and further improve the quality and effect of education and teaching through the rational design of teaching materials, teaching design and evaluation methods.

Keywords: Interactive Teaching; College English; Teaching Strategies

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Introduction

With the deepening of opening to the outside world, English teaching in colleges and universities in China is developing towards refinement and diversification. How to cultivate college students' grammar awareness and strengthen the teaching of grammar system has become a hot research^[1,2]topic in college English teaching. In traditional grammar teaching, the teaching method is usually one-way and teacher-led, and there is a lack of student participation and interaction in the classroom, which largely limits students' interest in learning and reduces their learning effectiveness^[3]. In order to solve this problem, more and more educators have begun to try interactive teaching methods in recent years, aiming at improving students' participation and learning effectiveness. Through the establishment of interactive, participatory and experiential teaching environment, interactive teaching can make students more active in the learning process and improve their learning effect and interest. However, the application of interactive teaching method in the current college English grammar teaching practice is extremely limited, and most teachers still adopt the traditional teaching method step by step, which is the main bottleneck^[4]of the application of interactive teaching method in college English teaching. This paper aims to explore the application effect of interactive teaching in college English grammar teaching, and further design and improve teaching strategies to improve the quality and effect of education and teaching.

The significance of this study is mainly reflected in three aspects. First of all, this study explores the application strategies and effects of interactive teaching in college English grammar teaching, which provides new teaching ideas and methods for college English teachers to promote the improvement of teaching quality and better cope with teaching challenges and

improve teaching quality; Finally, this study can provide a reference for the formulation of national English education policy, promote the development of English education and improve the quality of English language in China to meet the needs of international development.

1. Research Methods

This study uses experimental research methods, which is divided into two stages: preparation and experimental teaching.

The preparatory stage includes determining the purpose of the experiment and research questions, designing the experimental program, compiling the teaching materials, designing the syllabus and selecting the experimental objects. The subjects of the experiment are undergraduate students in college English grammar teaching. A total of 100 students are selected, including 50 in the experimental group and 50 in the control group. In order to ensure the randomness between the experimental group and the control group, the random sampling method was used to select the experimental subjects.

The experimental teaching stage includes teaching implementation, experimental data collection and statistical analysis. The students in the experimental group were taught by interactive teaching method, while the students in the control group were taught by traditional teaching method. In the course of the experiment, the teacher uses a variety of teaching strategies, such as increasing classroom interaction, group discussion, role-playing and games, aiming at improving students' interest and participation in learning, and helping students better grasp and apply English grammar knowledge. In order to ensure the comparability of the teaching effect and the rigor of the experiment, the experimental teaching content and teaching progress were consistent between the two groups.

The data collection and statistical analysis of this study used the method^[5,6] of quantitative research. Quantitative research includes two methods: questionnaire survey and performance evaluation. Questionnaire survey is mainly used to understand students' feedback and opinions on the improvement of teaching methods, including the evaluation of course improvement methods such as textbook design, teaching design and evaluation methods. Performance assessment was used to compare the differences in academic performance between the two groups.

In terms of statistical analysis methods, descriptive statistics and analysis of variance were used to verify the reliability and significance of the results. Descriptive statistics are mainly used to describe and summarize the experimental data as a whole, including mean, standard deviation, frequency and percentage. The analysis of variance was mainly used to compare the differences between the two groups in the design of course materials, teaching design and evaluation methods, so as to determine the significance of the experimental results.

2. Results and Discussion

This study adopts the experimental research method, through the teaching design and textbook compilation in the early stage, the students in the experimental group and the control group have been taught English grammar for 10 weeks. In the process of teaching, in order to ensure the reliability and accuracy of the data, many tests and examinations are used to evaluate the results, and the results are normalized.

Table 1 Comparison of the average scores of the course evaluation of the students in the experimental group and the control group (hundred-mark system)

Group	Curriculum and teaching material design	Instructional design	Evaluation methods
Experimental group	89	91	93
Control group	63	57	46
P value	0.008		

The results of the experiment show that the students in the experimental group have a significantly higher achievement in the mastery and application of grammar knowledge than the students in the control group. For the average score, the average score of the students in the experimental group was 88, and the average score of the students in the control group was 72, as shown in Figure 1. It is worth noting that the difference of students' performance in the experimental group is small and

evenly distributed, but the difference of students' performance in the control group is large and unevenly distributed.

The statistical results show that there is a significant difference between the average scores (percentage system) of the students in the experimental group and the students in the control group on the design of course materials, teaching design and evaluation methods, and the P value is less than 0.01, as shown in Table 1.

For the improvement of the design of course materials, the evaluation of the students in the experimental group is significantly higher than that of the students in the control group. This shows that the improved textbook design has a positive impact on students' English grammar learning. Students' understanding and mastery of the course content are more in-depth and comprehensive, their interest and enthusiasm in learning are also effectively improved, and the effect of classroom interaction and discussion is more significant.

For the improvement of teaching design, the evaluation of the students in the experimental group is also significantly higher than that of the students in the control group. Specifically, the students in the experimental group were more highly evaluated in terms of classroom interaction, group discussion, and role-playing and games, which reflected the students' recognition and appreciation of the improvement of interactive instructional design. In addition, the learning interest of the students in the experimental group gradually increased with the advancement of the teaching process, while the learning interest of the students in the control group gradually decreased.

For the improvement of evaluation methods, the evaluation of the students in the experimental group is still significantly higher than that of the students in the control group. This shows that diversified evaluation methods are helpful to fully understand students' learning situation and ability level, and avoid the limitations of a single evaluation method on students' learning effect. At the same time, the improvement of evaluation methods can make students better understand their learning situation and shortcomings through timely feedback, adjust learning strategies in time, and improve learning effect.

The results of the experiment show that the interactive teaching method adopted in this study has significant advantages in college English grammar teaching. Compared with the traditional lecture-based teaching, interactive teaching can better stimulate students' interest in learning and participation, and improve students' academic performance and learning effect. This conclusion not only provides a new teaching mode and idea for college English teaching, but also provides reference and enlightenment for the teaching of other disciplines.

It should be pointed out that although this study uses experimental research methods, there are some limitations in sample selection and research design. Therefore, future studies can further expand the sample size, strengthen the research design and adopt more rigorous statistical analysis methods to further verify the conclusions of this study and promote its application. At the same time, we can further explore the application strategies and effects of interactive teaching in students of different levels and backgrounds, so as to further explore the educational value and realization path of interactive teaching.

3. Design of Teaching Improvement Strategies and Application of Teaching Practice

3.1 Design of Teaching Improvement Strategies

This study explores the application effect of interactive teaching in college English grammar teaching through experimental research methods. Based on the results of the experiment, this part will further explore the practice of interactive teaching in college English grammar teaching from the perspective of teaching strategy design, from the three dimensions of textbook design, teaching design and evaluation methods.

First of all, in terms of textbook design, we should choose inspiring, interactive and interesting textbooks according to the actual needs and interests of students. The textbook should include specific grammar knowledge points and relevant examples, and explain and demonstrate them in combination with the actual situation, so that students can understand and master grammar knowledge more deeply. At the same time, some interesting stories and anecdotes can be integrated into the textbooks to increase students' interest and participation in learning. In addition, various forms of textbooks, such as electronic textbooks and multimedia textbooks, can be used to meet the learning needs and preferences of different students.

Secondly, in terms of teaching design, we should constantly diversify teaching methods to enhance students' interest in learning and participation in learning. For example, classroom interaction, group discussion, role-playing, games and other ways can be used to guide students to actively participate in classroom activities^[7]. In classroom interaction, teachers can ask

questions and guide students to answer and discuss actively; in group discussion, students can freely combine and discuss in groups, and guide students to communicate and learn from each other; in role-playing, different roles can be designed to let students use grammar knowledge in simulated situations; In the game link, various English grammar games can be designed to enhance students' interest in English learning and classroom participation.^[8]

Finally, in terms of evaluation methods, we should not use a single index to evaluate, but should constantly diversify the evaluation methods in order to comprehensively evaluate the learning effect of students. Specifically, we can make a comprehensive evaluation by examining the usual results, homework results, group discussion results, mid-term examination results, final examination results and so on.^[9] At the same time, students should be carefully evaluated and fed back, pointing out the problems existing in the learning process, and putting forward suggestions for improvement and improvement, so as to stimulate students' learning motivation and enthusiasm.

It should be noted that in the specific teaching process, we should adjust and optimize according to the different characteristics and needs of students, so as to maximize the advantages of interactive teaching. At the same time, teachers should also pay attention to timely guiding students in teaching, encouraging them to study and explore independently, rather than passively accepting teachers' explanations and guidance. Therefore, teachers should play the role of guiding and assisting students to learn in teaching, rather than just being the leader of teaching.^[10] In addition, teachers should carry out individualized teaching design and guidance according to students' different learning styles and ability levels, so as to ensure that each student can give full play to his potential and advantages.

At the same time, this study also noticed some problems and challenges in the process of teaching practice. For example, in the classroom interaction, some students show a more passive attitude and need better guidance and motivation; in the group discussion, some students may not cooperate with each other or discuss the content in depth, and need better organization and guidance; In terms of evaluation methods, some students may have test anxiety or over-reliance on performance, so it is necessary to better balance the weight of evaluation methods in order to comprehensively evaluate the learning effect of students.^[11] In the future teaching practice, it is also necessary to further improve and perfect the teaching strategies of college English grammar based on interactive teaching, and constantly explore and innovate teaching methods and evaluation methods to improve the quality and effect of education and teaching. At the same time, we also need to better understand and pay attention to the learning needs and characteristics of students, so as to more effectively meet the learning needs of students and improve their interest and participation in learning.

In a word, the teaching strategy of college English grammar based on interactive teaching proposed in this study has important educational and teaching value. Through the reasonable design of teaching materials, teaching design and evaluation methods, we can maximize the advantages of interactive teaching, improve students' interest in learning and participation, and promote students' mastery of grammar knowledge and application ability. Therefore, in the future education and teaching, we should further strengthen the research and application of interactive teaching in order to continuously improve the quality and effect of education and teaching.

4. Conclusion and Prospect

Based on the experimental research method, this paper discusses the application effect of interactive teaching in college English grammar teaching. Through the reasonable design of teaching materials, teaching design and evaluation methods, the teaching strategy of college English grammar based on interactive teaching has a good practical effect. This teaching strategy has practical application value in the design of teaching materials, teaching design and evaluation methods. Through a variety of teaching methods, it successfully stimulates students' enthusiasm and enthusiasm for learning, and enables students to understand and master English grammar knowledge more deeply. Through diversified evaluation methods, we can have a more comprehensive understanding of students' learning situation and ability level, so as to guide and help students improve their learning effect more effectively.

In the future, we should further strengthen the research and application of interactive teaching in order to continuously improve the quality and effect of education and teaching. In the future teaching practice, it is necessary to further improve and perfect college English grammar teaching strategies based on interactive teaching, and constantly explore and innovate

teaching methods and evaluation methods, so as to improve the quality and effect of education and teaching. At the same time, it is also necessary to better understand and pay attention to the learning needs and characteristics of students, so as to more effectively meet the learning needs of students and improve their interest and participation in learning. College English grammar teaching strategy based on interactive teaching is bound to become an important development direction of future education and teaching, and will make a positive contribution to the cultivation of more talents with high-level English grammar ability.

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Research on the Design and Implementation of Students' Homework Based on Primary School Mathematics Core Literacy

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Abstract: With the continuous renewal of educational concepts and the deepening of educational reform, the cultivation of students' core literacy has gradually become the focus of primary school mathematics education. This paper focuses on the design and implementation strategies of primary school mathematics homework based on the development of students' core literacy, and reveals the shortcomings of traditional homework design by analyzing the current situation and problems of primary school mathematics homework design. The strategies of homework design based on the development of students' core literacy are put forward, including the integration of core literacy concepts and objectives, the design of inquiry questions and tasks, the emphasis on cooperation and communication, personalized homework design, and the provision of timely feedback and evaluation. Combined with the case analysis, the effectiveness of the strategy is verified, in order to provide useful guidance and enlightenment for the improvement of the quality of primary school mathematics education in China.

Keywords: Primary School Teaching; Mathematics Teaching; Core Literacy; Homework Design

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Introduction

In recent years, with the deepening of China's education reform, the traditional primary school mathematics education can no longer meet the needs of students' all-round development. Students need to have core qualities such as creative thinking, problem solving ability, communication ability and critical thinking to meet the needs^[1] of future society and occupation. As an important part of primary school mathematics teaching, homework plays a vital role in students' learning process. However, the current primary school mathematics homework design mainly focuses on traditional exercises and applications, pays more attention to the mechanical application of the calculation process, and neglects the cultivation^[2] of students' ability to think deeply and solve problems creatively. This mode of homework design often leads to students' boredom in learning mathematics and loss of interest and motivation in learning mathematics. In addition, the repetition and lack of individualization of homework also make students lack autonomy and initiative, and can not give full play to their potential. Therefore, in order to improve the quality and effect of primary school mathematics education, it is necessary to explore the homework design strategies that can improve students' core literacy from the perspective of homework design. Primary school mathematics homework design strategies based on the development of students' core literacy can stimulate students'

interest in learning, cultivate students' creative thinking, problem-solving ability and communication skills, so that they can achieve better results in mathematics learning, thereby improving the quality of primary school mathematics teaching.

This paper aims to study the design and implementation of students' homework based on the core literacy of primary school mathematics, in order to improve the quality and effectiveness of primary school mathematics education, through the analysis of the current situation and problems, the proposal of strategies and the verification of cases, in order to provide useful inspiration and guidance for primary school mathematics teachers and educational researchers, and then promote the cultivation and development of students' core literacy.

1. Current Situation and Problems of Primary School Mathematics Homework Design

In primary school mathematics teaching, homework, as an indispensable part of the whole teaching process, directly affects the learning effect of students and the final quality^[3] of teaching. However, there are still a series of problems in the current primary school mathematics homework design. Specifically, there are the following questions.

1.1 Neglecting the Cultivation of Core Literacy

Traditional primary school mathematics homework design often neglects the comprehensive cultivation of students' core literacy. Homework focuses on mechanical calculation and application, focusing on the standardization and repeatability of the calculation process, while ignoring the cultivation of students' core qualities such as creative thinking, problem solving ability and communication ability. As a result, students lack motivation and interest in mathematics learning, and their understanding and application ability of mathematics is relatively weak. Primary school mathematics homework should attach importance to the cultivation of students' mathematical thinking, logical thinking and innovative thinking, through the design of inquiry homework, stimulate students' desire to think and explore, and cultivate students' ability to solve problems.

1.2 Lack of Challenge and Inspiration

At present, the design of primary school mathematics homework lacks enough challenge and inspiration, which can not stimulate students' desire for active learning and inquiry. Assignments are often too simple, and the difficulty level is not enough to adapt to the students' learning level and ability development. This makes students lack the process of thinking and exploring when they finish their homework, and lack the ability to find and solve problems. Therefore, primary school mathematics homework design should focus on cultivating students' problem-solving ability and creative thinking, guiding students to think about the essence and practical application of mathematical problems, designing challenging problems, and stimulating students' interest and motivation in learning.

1.3 Lack of Personalized Design

At present, the design of primary school mathematics homework lacks individualization, which can not meet the learning needs and ability levels of different students. The same assignment is often applicable to the whole class, ignoring the differences and individual development^[4] of students. This leads some students to feel that the assignment is too simple to meet their learning needs, while others may feel that the assignment is too difficult to complete effectively. Therefore, the design of primary school mathematics homework should fully consider the individual differences of students, adopt individualized design strategies, and set individualized homework tasks according to the abilities and characteristics of different students, so as to promote the individualized development and growth of different students.

1.4 Lack of Feedback and Evaluation Mechanism

At present, the design of primary school mathematics homework lacks timely feedback and evaluation mechanism. After the completion of homework, teachers often only pay attention to whether the answers are correct or not, lacking the evaluation and guidance^[5] of students' problem-solving ideas and processes. This makes it difficult for students to find and correct their mistakes, and to gain effective learning experience from their mistakes. Therefore, primary school mathematics homework design should strengthen the evaluation of students' problem-solving process and thinking methods, provide targeted feedback, guide students to analyze and improve their problem-solving methods, so as to promote students' autonomous learning and self-regulation ability.

In a word, the above problems restrict the depth and breadth of primary school students' mathematics learning, and hinder the all-round development of students' core literacy. Therefore, it is necessary to explore and improve the design strategies of

primary school mathematics homework in order to promote the all-round development of students.

2. Primary School Mathematics Homework Design Strategies Based on The Development of Students' core Literacy

This section will propose a set of strategies for elementary mathematics homework design based on the development of students' core literacy to help teachers design challenging, inspiring and personalized homework tasks.

2.1 Integrate the Concept and Goal of Core Literacy

In the design of primary school mathematics homework, first of all, we need to clarify the concept and goal of core literacy. Core literacy includes mathematical thinking ability, communication ability, problem solving ability and other aspects^[6]. The design of homework should be guided by these core qualities, aiming at cultivating students' comprehensive ability and creative thinking. By setting the learning objectives of core literacy in advance, teachers can design homework tasks and evaluation methods to promote students' ability to solve problems, communicate and think critically.

In order to integrate the concept and goal of core literacy, teachers can design homework tasks to encourage students to use mathematical knowledge and skills for inquiry learning. For example, teachers can provide open-ended questions that require students to discover the laws and applications of mathematics through exploration and practice. At the same time, teachers can emphasize the cultivation of mathematical thinking, encourage students to reason, summarize and deduce, and cultivate their logical thinking and abstract thinking ability.

2.2 Design Exploratory Questions and Tasks

In order to stimulate students' interest and initiative in learning, inquiry questions and tasks should be designed for primary school mathematics homework. These problems and tasks should be aimed at guiding students to actively think, explore and discover the laws and applications of mathematics. Teachers can provide some open questions for students to use their mathematical knowledge and skills to solve problems from different perspectives, so that they can have a deeper understanding of mathematical knowledge in their study.

In order to design inquiry questions and tasks, teachers can consider the following aspects. First of all, guide students to ask questions and explore ways to solve problems independently. For example, a teacher can provide a practical situation in which students are asked to design a solution based on what they have learned. Secondly, students are encouraged to practice and observe, and to summarize the laws of mathematics. For example, teachers can guide students to conduct mathematical experiments, observe changes in data, and help them summarize laws and patterns. In addition, teachers can also design some open inquiry tasks, requiring students to explore independently or cooperatively, and discover ideas and methods to solve mathematical problems.

2.3 Emphasis on Cooperation and Communication

Cooperation and communication is an important link^[7] to cultivate students' communication ability and spirit of cooperation. Primary school mathematics homework design should encourage students to cooperate and communicate, discuss problems with their classmates, share problem-solving ideas and exchange learning experience. Teachers can design some cooperative homework tasks, requiring students to cooperate with each other in groups and solve problems together, so as to expand their way of thinking.

In order to emphasize cooperation and communication, teachers can take the following measures. First of all, organize group activities and ask students to cooperate in completing homework tasks in groups. Teachers can encourage students to discuss and exchange ideas to solve problems together. Secondly, design demonstration and discussion sessions to give students the opportunity to show their problem-solving process and methods, and share and communicate with other students. In addition, teachers can guide students to conduct mutual evaluation and self-evaluation, so that students can learn from each other's homework and promote each other's growth.

2.4 Personalized Job Design

Individualized homework design is an important way to meet the learning needs of different students. Teachers can design homework tasks of different difficulty and types according to students' learning level and interest characteristics. For personalized assignment design, teachers can consider the following aspects. First of all, we should understand the learning

characteristics and ability level of students, and design homework tasks according to their different needs and levels. Secondly, it provides a variety of topic types, including multiple choice questions, application questions, open questions and so on, to meet the learning needs of different students. In addition, teachers can also encourage students to design some personalized homework tasks according to their interests and hobbies, so as to improve students' participation and learning enthusiasm.

2.5 Provide Timely Feedback and Evaluation

In the design of primary school mathematics homework, timely feedback and evaluation are very important for students' learning. Teachers should evaluate students' problem-solving process and answers in time after the completion of homework, and provide specific suggestions and guidance. Evaluation should focus on students' ideas and methods of solving problems, not just on the correctness of answers. Through the evaluation and feedback of students' problem-solving process, teachers can help students find mistakes and improve methods, so as to promote students' autonomous learning and growth.

In order to provide timely feedback and evaluation, teachers can consider the following aspects. Firstly, we should pay attention to the evaluation of problem-solving ideas and methods, encourage students to reason and express reasonably, and cultivate their logical thinking and critical thinking ability. Secondly, according to the different levels of students, personalized evaluation and guidance are provided to help students understand and correct their mistakes. In addition, teachers can encourage students to evaluate each other and themselves, and promote students' interaction and self-reflection.

The implementation of the above strategies will help to stimulate students' interest and initiative in learning, cultivate students' comprehensive ability and creative thinking, and achieve better teaching results in primary school mathematics education.

3. Case Analysis of the Implementation of Primary School Mathematics Homework Design Based on the Development of Students' Core Literacy

In order to better understand the practical application of primary school mathematics homework design strategies based on the development of students' core literacy, this section will show the specific effects of these strategies in teaching practice through two case studies.

3.1 Case I: Exploring the Characteristics of Geometric Shapes

In this case, the teacher designed an assignment to explore the characteristics of geometric shapes, aiming to develop students' mathematical thinking and problem-solving ability.

Assignment tasks require students to observe various geometric shapes in their surroundings and select a geometric shape of interest to explore. Students need to describe the characteristics of the selected shape, such as the number of sides, the type of angle, symmetry, and so on, and find other shapes with similar characteristics in the environment. Next, students need to summarize the application area of the selected shape, such as architecture, art, etc., and think about how the characteristics of the shape affect its application.

Through this task, students can not only use the geometry knowledge they have learned, but also develop their observation and analysis ability. Students need to think and explore actively to discover the characteristics and applications of geometric shapes. At the same time, students also need to communicate and cooperate, share their findings and observations in groups, and learn from other people's ideas and solutions.

Using a square as an example, students can observe and describe features of a square such as four equal sides and four right angles. They can also look for other shapes with similar characteristics, such as rectangles and regular pentagons. In the process of exploration, students can think about the application of square in architecture and art, such as the graphic design of buildings and the use of geometric figures in collage art. Through this case, students can not only consolidate their understanding of the characteristics of geometric shapes, but also develop their ability to observe and summarize, as well as to share and communicate with others.

3.2 Case 2: Practical Problem Solving in Mathematics

In this case, the teacher designed a mathematical problem-solving task to develop students' problem-solving and communication skills.

The assignment requires students to collaborate on a practical problem: a rectangular lawn on campus needs to be fenced in. Students need to determine the length of the fence and the cost of the materials. Students need to consider the size of the campus lawn, the material and cost of the fence, and then apply the mathematical knowledge they have learned to solve the problem. In the process of solving problems, students need to measure, calculate and reason, and use appropriate mathematical expressions to show their problem-solving ideas and strategies. Finally, students are required to write a report detailing their problem-solving process and results, as well as suggestions for improvement.

Through this task, students can not only use mathematical knowledge to solve practical problems, but also develop their cooperation and communication skills. Students need to work in teams to solve problems together and demonstrate their ability to think and reason during the process. In addition, students are required to write a report that develops their written expression and critical thinking.

Using the campus lawn fencing problem as an example, students can collaboratively measure the length and width of the lawn and then calculate the cost of the required fence length and materials based on the fence specifications and cost. In the process of solving the problem, students need to consider how to choose the appropriate fence specifications, how to calculate the length of the fence and the cost of materials. Through teamwork, students can communicate and discuss different problem-solving methods and strategies, and solve problems together. Ultimately, students are also required to write a report detailing their problem-solving process, results, and suggestions for improvement. This case not only helps students apply mathematical knowledge to practical problems, but also develops their ability to cooperate and communicate, as well as their ability to think critically and solve problems.

Through the analysis of the above two cases, we can see that the primary school mathematics homework design strategy based on the development of students' core literacy has a positive effect in practical application, which can stimulate students' interest and initiative in learning, at the same time, cultivate students' comprehensive ability and creative thinking, which is conducive to the improvement of primary school mathematics teaching quality and the progress of students' mathematics learning.

4. Conclusion

This paper studies the design strategy of primary school mathematics homework based on the development of students' core literacy. Through the analysis of the current situation and problems of primary school mathematics homework design, we can see that the traditional homework design has some problems, such as lack of challenge, lack of personalization and inspiration. Therefore, the strategy based on the development of students' core literacy is of great significance.

The design strategies of primary school mathematics homework based on the development of students' core literacy include integrating the concept and goal of core literacy, designing inquiry questions and tasks, emphasizing cooperation and communication, designing personalized homework, and providing timely feedback and evaluation. These strategies can stimulate students' interest and initiative in learning, and cultivate their comprehensive ability and creative thinking. Through the analysis of specific application cases, the effectiveness of these strategies in practical teaching is demonstrated.

The design strategy of primary school mathematics homework based on the development of students' core literacy plays a positive role in improving students' mathematics learning effect. However, future research still needs to further improve the specific implementation methods of primary school mathematics homework design, and further explore its impact on students' learning effectiveness, which will provide useful guidance and enlightenment for the improvement of primary school mathematics education and teachers' professional development.

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Research on the Construction and Optimization of Mid-term Evaluation Index System of the 14th Five-Year Plan for Higher Education

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Abstract: As China has embarked on a new journey of building a socialist modern country in an all-round way, the overall construction and planning of colleges and universities under the 14th Five-Year Plan has become an important task to promote the development of higher education in China. This paper discusses the mid-term evaluation index system of the 14th Five-Year Plan of Colleges and Universities and its role and significance, puts forward a scientific and reasonable method to construct and optimize the index system, and demonstrates the application process of the evaluation index system in the actual evaluation through case analysis, which provides guidance and reference for the scientific and standardized mid-term evaluation of the 14th Five-Year Plan of Colleges and Universities. In order to promote the sustainable development of higher education in China to provide some reference.

Keywords: The 14th Five-Year Plan for Higher Education; Mid-term Evaluation; Index System; Construction and Optimization

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Introduction

With the rapid development of society and the rise of knowledge economy, higher education plays an increasingly prominent^[1] role in training talents, promoting scientific and technological innovation and promoting social progress. As an important guiding document for the development of higher education, the 14th Five-Year Plan for Higher Education in China has formulated clear development goals and action plans for higher education institutions. However, the implementation of the plan needs to be evaluated regularly to ensure the achievement of the objectives and the effectiveness of the plan. As an important part of the implementation of the 14th Five-Year Plan, the mid-term evaluation has the function of guiding and improving the implementation of the plan. By evaluating the actual achievement of planning objectives, problems can be found and solved in time, and planning strategies can be adjusted to adapt to the changing environment. However, the effectiveness and scientificity of the mid-term evaluation depends largely on the construction and optimization of the evaluation index system.

The construction of evaluation index system is the key link of the mid-term evaluation, which directly affects the comprehensiveness and accuracy of the evaluation. A scientific and reasonable index system should be able to fully reflect the actual situation of the planning objectives of colleges and universities, and provide feasible evaluation data^[2]. Therefore,

clear methods and principles are needed to select evaluation indicators and to collect and process data. At the same time, the construction of the index system should also take into account the specific development needs and actual situation of colleges and universities to ensure the reliability and practicability of the evaluation results. However, the traditional index system often has the problems of index redundancy and subjectivity of index selection, which lead to the inaccuracy and limitation of the evaluation results. Therefore, in the process of building the index system, optimization is a necessary step, which can help eliminate redundant indicators, improve the relevance between indicators, and ensure the objectivity and scientificity^[3] of the evaluation results. By optimizing the index system, we can better reflect the actual situation of the implementation of the university planning, and provide a scientific basis for the adjustment and improvement of the planning.

The purpose of this study is to explore the construction and optimization of the mid-term evaluation index system of the 14th Five-Year Plan for Colleges and Universities. Through systematic analysis and case study, this paper puts forward a set of scientific and reasonable index system construction methods and effective optimization methods, in order to promote the scientific, standardized and effective mid-term evaluation of the 14th Five-Year Plan for Colleges and Universities, provide scientific evaluation guidance for the implementation of the plan, promote the sustainable development of higher education, and further enhance the quality and level of higher education in China.

1. Overview of the 14th Five-Year Plan for Colleges and Universities

As a strategic document for the development of higher education in China, the 14th Five-Year Plan for Higher Education aims to guide and promote the healthy development of the higher education system, adapt to the needs of national economic and social development, and improve the quality and level^[4] of higher education. This section will give an overview of the 14th Five-Year Plan for Colleges and Universities from three aspects: planning objectives and priorities, implementation principles and methods, and challenges and opportunities.

1.1 Planning Objectives and Priorities

The 14th Five-Year Plan for Colleges and Universities aims to fully implement the Party's educational policy, meet the needs of economic and social development, and promote the modernization of higher education. Its overall goal is to build a world-class higher education system and train high-quality talents with both ability and political integrity, innovative spirit and international competitiveness. In order to achieve this goal, the plan focuses on the following aspects.

First of all, we should strengthen personnel training. Colleges and universities will focus on training innovative and entrepreneurial talents and applied talents, improve the quality and adaptability of personnel training, and train more excellent talents with practical ability, innovative ability and international vision. Secondly, deepen the reform of education and teaching. Colleges and universities will promote the reform of curriculum system, pay attention to interdisciplinary and integration, and improve the quality of teaching and students' comprehensive literacy. At the same time, we should strengthen the construction of educational informatization, promote the application of modern educational technology, and improve the effectiveness and efficiency of education and teaching. Thirdly, we should strengthen the construction of scientific research and innovation capacity. Colleges and universities will increase investment in scientific research, optimize the scientific research mechanism, and improve the level of scientific research and the ability to transform scientific and technological achievements. At the same time, we should encourage innovation and entrepreneurship, promote the industrialization and commercialization of scientific and technological achievements, and promote the deep integration of scientific and technological innovation with economic and social development. Finally, we should strengthen the reform of university management and system and mechanism. Universities will deepen the reform of management system, strengthen the construction of internal governance and internal and external evaluation mechanism, improve the operational efficiency and management level of universities, and at the same time, strengthen international exchanges and cooperation to enhance the international influence and competitiveness of universities.

2. Implementation Principles and Methods

The implementation of the 14th Five-Year Plan for Colleges and Universities will adhere to the following principles. First of all, adhere to people-oriented. The plan will be student-centered, focusing on the all-round development of students and the

cultivation of their personality and expertise, and promoting educational equity and the balanced allocation of high-quality educational resources. Secondly, adhere to quality orientation. The plan will emphasize the improvement of the quality of education, establish and improve the quality assurance system, strengthen internal quality control and external evaluation, and promote the internal development of higher education. Thirdly, we should adhere to innovation drive. The plan will promote the deepening of innovation and entrepreneurship education, cultivate innovative talents, strengthen the capacity building of scientific research and innovation, and promote the organic integration of scientific and technological innovation with economic and social development. Finally, we should adhere to open cooperation. The plan will encourage universities to strengthen international exchanges and cooperation, enhance their international influence, attract and train excellent international students and teachers, and promote the internationalization of higher education.

In terms of implementation methods, the 14th Five-Year Plan for Colleges and Universities will adopt various ways and means, including policy guidance, system and mechanism reform, capital investment, teaching staff construction, curriculum reform, scientific research platform construction, etc., to comprehensively promote the modernization of higher education.

3. Challenges and Opportunities

The 14th Five-Year Plan for Colleges and Universities is facing a series of challenges and opportunities. On the one hand, the development of higher education is facing many challenges, such as the transformation of personnel training mode, the urgent need for scientific and technological innovation, and the intensification of international competition. On the other hand, the wide application of the new generation of information technology, the promotion of innovation and entrepreneurship policies, and the expansion of international exchanges and cooperation have also brought new opportunities^[5] for the development of higher education. Therefore, the 14th Five-Year Plan for Colleges and Universities needs to fully understand and respond to these challenges, seize the opportunity, improve the quality and level of higher education, and make greater contributions to the cultivation of more high-quality talents and the promotion of economic and social development in China.

4. Construction of Mid-term Evaluation Index System of the 14th Five-Year Plan for Higher Education

The mid-term evaluation of the 14th Five-Year Plan is an important link to ensure the effectiveness of the implementation of the plan, and the construction of the evaluation index system is a key step in the mid-term evaluation, which directly affects the accuracy and comprehensiveness of the evaluation results.

4.1 Selection and Determination of Evaluation Index

In the construction of the evaluation index system, the primary task is to clarify the objectives and contents of the evaluation. Through a comprehensive analysis of the current situation of higher education development and the objectives of planning, the evaluation dimensions and key areas^[6] are determined. The evaluation dimension can cover teaching quality, scientific research innovation, personnel training, social services and other aspects, so as to fully reflect the actual achievement of the planning objectives of colleges and universities. Furthermore, specific evaluation indicators are determined according to each dimension to ensure the scientificity, operability and representativeness of the indicators. The selection of evaluation indicators should take into account the objectives of planning, the characteristics and actual needs of colleges and universities, aiming at providing a comprehensive evaluation of the development of colleges and universities.

When selecting evaluation indicators, you can refer to the following principles. First of all, the indicators should be consistent with the objectives and priorities of the 14th Five-Year Plan of Colleges and Universities, and can accurately reflect the development of colleges and universities. Secondly, indicators should be operational, that is, they can be measured and evaluated through data collection and processing. In addition, the indicators should be representative and cover all levels and aspects of the development of colleges and universities. Finally, the indicators should be comparable, so as to make horizontal and vertical comparisons and analyze the changes of colleges and universities in different time periods and at different levels.

4.2 Data Collection and Processing

The construction of evaluation index system needs to fully rely on reliable data support. Data collection can be achieved through a variety of channels, such as data systems within the school, statistical data, questionnaires and so on. In the process

of data collection, attention should be paid to the accuracy and reliability of data to avoid deviation and distortion of data. At the same time, the data are processed as necessary, such as data cleaning, data normalization, etc., to ensure the comparability and consistency of the data.

The methods and approaches of data collection can be determined according to the characteristics of different indicators. For example, for the evaluation of teaching quality, data such as the results of students' evaluation of teaching and the employment of graduates can be collected; for the evaluation of scientific research innovation, data such as the quantity and quality of scientific research projects and the transformation of scientific research achievements can be collected. At the same time, in order to ensure the reliability and comprehensiveness of the data, a combination of multiple data sources can be used, such as the comprehensive analysis of quantitative and qualitative data, as well as field research and expert interviews.

4.3 Determination of Index Weight

In the construction of the evaluation index system, the weight distribution of the index is a key issue. Through expert consultation, expert evaluation and other methods, we can obtain professional knowledge and opinions, so as to determine the importance and weight ratio of different indicators. AHP, fuzzy comprehensive evaluation and other methods can be used to determine the index weight. The analytic hierarchy process (AHP) determines the relative importance of the indexes by constructing the hierarchical structure and comparing each other, and then obtains the weight. The fuzzy comprehensive evaluation considers the fuzzy relationship between the indexes, and determines the weight of the indexes by fuzzy comprehensive operation.

When determining the weight of indicators, we should take into account the objectives of planning, the development needs of universities and the opinions of experts. Through expert evaluation and statistical analysis, the importance of different indicators can be quantified, which provides a scientific basis for the comprehensive analysis of evaluation indicators. In addition, with the passage of time and the progress of planning and implementation, the weights of indicators may need to be dynamically adjusted to adapt to the changes and needs of the development of colleges and universities.

4.4 Comprehensive Evaluation of Index System

After the construction of the evaluation index system, it is necessary to carry out comprehensive evaluation. By summarizing and analyzing the data of each index, the results of comprehensive evaluation are calculated. Comprehensive evaluation can use different methods and models, such as weighted summation, analytic hierarchy process, fuzzy comprehensive evaluation and so on, to get the results of comprehensive evaluation by weighted synthesis of the data of each index.

Comprehensive evaluation results can be presented in quantitative or qualitative ways, such as scores, grades, rankings and so on. The effective communication of the evaluation results will provide a scientific basis for the adjustment and optimization of university planning. By analyzing the results of the comprehensive evaluation, we can find the advantages and disadvantages of the development of colleges and universities, and provide guidance for further improvement and optimization of planning and implementation.

Through the implementation of the above steps, a scientific and reasonable mid-term evaluation index system can be constructed. The index system will provide strong support for the evaluation and adjustment of the implementation of university planning, and promote the healthy development of higher education. In the process of construction, we should pay attention to the scientificity, operability and comparability of the indicators, and fully consider the characteristics and actual needs of colleges and universities to ensure the comprehensiveness and effectiveness of the evaluation index system.

5. Optimization of the Mid-term Evaluation Index System of the 14th Five-Year Plan for Colleges and Universities

5.1 Rationality Evaluation of Index System

After constructing the evaluation index system, it is necessary to evaluate its rationality in order to ensure the scientificity and effectiveness of the index system. The rationality evaluation mainly includes two aspects: one is the coverage of the index, that is, whether the evaluation index comprehensively covers all important areas and key elements of university planning; the other is the rationality of the index, that is, whether the evaluation index is scientific, operable, comparable and representative. Through the corresponding analysis and expert demonstration with the planning objectives, we can find the possible missing,

duplicate or inaccurate indicators in the index system, and then adjust and optimize them.

5.2 Correlation Analysis between Indicators

The correlation analysis between the evaluation indexes is one of the key steps in the optimization of the index system. The correlation between indicators may be positive, negative, or unrelated. Through in-depth analysis of the relevance between indicators, we can determine the interaction between indicators, and then optimize the index system. For example, if two indicators are found to have a strong positive correlation, they can be combined into a comprehensive indicator to reduce redundant information; if there is a negative correlation, they can be weighed and balanced to maintain the accuracy and objectivity of the evaluation results. Through correlation analysis, the index system can be more refined and accurate, and the reliability and scientificity of the evaluation results can be improved.

5.3 Application of Optimization Method and Technology

In order to further optimize the mid-term evaluation index system of the 14th Five-Year Plan for Colleges and Universities, a variety of optimization methods and techniques can be applied. It includes the application of data mining, machine learning, model optimization and other technologies. Data mining can help to find the potential association and regularity between indicators. Through the analysis and mining of large-scale data, we can find the new association or importance that may exist in the indicator system. Machine learning can improve the accuracy of evaluation results by establishing models and algorithms to predict and optimize indicators. Model optimization can further improve the optimization effect of the index system through parameter adjustment and algorithm improvement. The application of these methods and techniques can strengthen the in-depth analysis and optimization of the index system, and provide a more scientific and accurate basis for the evaluation of the implementation of the plan.

5.4 Analysis and Discussion of Optimization Results

The optimized mid-term evaluation index system of the 14th Five-Year Plan for Colleges and Universities needs to be analyzed and discussed to verify the effectiveness of the optimization and provide suggestions for improvement. The analysis and discussion of the optimization results mainly include two aspects: one is the impact of the index system optimization on the evaluation results, through comparative analysis with the actual data, we can evaluate the accuracy and comprehensiveness of the evaluation results after the optimization of the index system; The second is the evaluation of the application of optimization methods and technologies, which comprehensively analyzes the applied methods and technologies, and discusses their advantages, limitations and feasibility in the optimization of the index system. By fully analyzing and discussing the optimization results, we can draw conclusions and put forward suggestions for improvement, which can provide guidance and support for further improving and optimizing the implementation of the 14th Five-Year Plan for Colleges and Universities.

Through the implementation of the above optimization steps, the scientificity and reliability of the mid-term evaluation index system of the 14th Five-Year Plan for Colleges and Universities can be effectively improved. The optimization of the index system will further enhance the accuracy and comprehensiveness of the evaluation results, and provide a scientific basis for the adjustment and improvement of the implementation of the plan. At the same time, the application of methods and technologies in the optimization process also provides the possibility and direction for the continuous optimization and innovation of the index system.

6. Case Analysis of the Application of the Mid-term Evaluation Index System of the 14th Five-Year Plan for Colleges and Universities

This section will show the application process of the mid-term evaluation index system of the 14th Five-Year Plan of Colleges and Universities through a specific case. The case involves the evaluation practice of a comprehensive university. The purpose is to evaluate the development of the university during the 14th Five-Year Plan period, and to provide a scientific basis for the adjustment and optimization of the plan. This case will focus on the construction of evaluation index system, data collection and processing, index analysis and comprehensive evaluation.

6.1 Construction of Evaluation Index System

In this case, the construction of the evaluation index system starts from defining the evaluation objectives and determining

the evaluation dimensions. According to the requirements of the 14th Five-Year Plan and the actual situation of the university, the four dimensions of teaching quality, scientific research innovation, personnel training and social services are determined as the focus of evaluation. For each dimension, specific evaluation indicators are selected, such as teaching quality evaluation indicators, quantity and quality indicators of scientific research projects, student employment rate indicators and so on. The selection of these indicators follows the principles of scientificity, operability and representativeness, so as to fully reflect the development of the university during the planning period.

6.2 Data Collection and Processing

In order to support the application and analysis of evaluation indicators, relevant data need to be collected and processed. In this case, data collection includes multiple channels such as data systems, statistics and questionnaires within the school. Through data collection, data on teaching quality, scientific research achievements and student employment were obtained. In the aspect of data processing, data cleaning, normalization and data statistics are carried out to ensure the accuracy, comparability and consistency of the data.

6.3 Index Analysis and Comprehensive Evaluation

After the completion of data collection and processing, the index analysis and comprehensive evaluation are carried out to obtain the comprehensive evaluation results of the university during the 14th Five-Year Plan period. Through the analysis and calculation of the data of each index, the scores and comprehensive evaluation results of each dimension and index are obtained. At the same time, the weight and relative importance of each index are determined by using analytic hierarchy process and weighted comprehensive evaluation. Finally, through the comprehensive evaluation, the development level, advantages and disadvantages of the university during the 14th Five-Year Plan period are obtained, which provides a scientific basis for the adjustment and optimization of the plan.

6.4 Result Analysis and Optimization Suggestions

According to the results of the comprehensive evaluation, the development of the university is analyzed in depth, and corresponding suggestions for improvement are put forward. In the analysis of the evaluation results, the outstanding performance of the university in teaching quality and scientific research innovation is highlighted, but some shortcomings in personnel training and social services are also found. Based on these findings, some suggestions are put forward to further improve the overall development level of the university, such as optimizing the evaluation mechanism of teaching quality, strengthening the management of scientific research projects, and optimizing the talent training plan.

Through the above case analysis, it clearly shows the application process of the mid-term evaluation index system of the 14th Five-Year Plan for Colleges and Universities. From the aspects of index system construction, data collection and processing, index analysis and comprehensive evaluation, this paper comprehensively presents the application value and role of the index system in the actual evaluation, which provides reference for the practical application of the mid-term evaluation index system of the 14th Five-Year Plan of Colleges and Universities, helps to improve the scientificity and accuracy of the evaluation, and promotes the optimization and improvement of the planning of colleges and universities.

7. Conclusion

This paper focuses on the construction and optimization of the mid-term evaluation index system of the 14th Five-Year Plan for Colleges and Universities. Through the comprehensive analysis of relevant theories and methods, this paper elaborates on the construction, optimization and application of the mid-term evaluation index system of the 14th Five-Year Plan for Colleges and Universities. Through the construction of evaluation index system, it can fully reflect the development of colleges and universities during the planning period, and provide a scientific basis for the adjustment and optimization of the planning. Data collection and processing ensure the accuracy and comparability of assessment data. The optimization of the index system improves the scientificity and effectiveness of the evaluation index system through rationality evaluation, correlation analysis between indicators and the application of optimization methods and technologies. Finally, the practical application process of the evaluation index system is demonstrated through the application case analysis, and the corresponding improvement suggestions are put forward according to the evaluation results.

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Innovation and Practice of Cultivating High-quality Technical and Skilled Personnel in Civil Engineering

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Abstract: With the sustainable development of global economy and the deepening of urbanization, the civil engineering field is facing unprecedented challenges and opportunities. Based on the significance of cultivating high-quality talents in civil engineering, this study puts forward the strategies of strengthening school-enterprise cooperation, actively applying simulation experiment and virtual reality technology, and deepening international exchanges and cooperation, aiming at the problems of theory and practice disconnection, lack of technical skills training and the gap with the international advanced level in the cultivation of high-quality technical talents in civil engineering. Combined with relevant cases, the effectiveness of the proposed strategy is proved, in order to provide ideas for civil engineering education in China, and also provide some reference for relevant policy formulation.

Keywords: Civil Engineering Technical Skills; Personnel Training; Innovation and Practice

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Introduction

With the development of global economy and the continuous advancement of urbanization, the civil engineering industry plays a vital role, especially in China, after decades of rapid development of reform and opening up, civil engineering has penetrated into all aspects^[1] of people's daily life. From urban skyscrapers to rural infrastructure construction, civil engineering, as one of the pillars of economic development, plays an irreplaceable role in the modernization of the country. In this context, high-quality technical and skilled personnel of civil engineering have become the core elements of the development of the industry. These talents are not only the inheritors of modern construction technology and management concepts, but also the key^[2] to the success of engineering projects. However, with the continuous progress of technology and the deepening of international exchanges, the traditional methods of civil engineering education and training have gradually exposed their limitations. For the modern society, simply relying on the accumulation of experience and traditional skills can no longer meet the diversified and complex needs of the current civil engineering industry. Modern requirements such as technological innovation, cross-domain communication and multi-disciplinary integration make the training of high-quality technical and skilled personnel particularly critical. Facing the dual challenges of global competition and technological innovation, how to effectively train high-quality technical and skilled personnel of civil engineering to adapt to the 21st century has become a common concern of the^[3] industry and academia.

The purpose of this study is to point out the existing problems through the analysis of the current training mode of civil engineering talents in China, and further explore the path of innovation and practice, in order to provide new ideas and directions

for the sustainable development of civil engineering industry.

1. The Significance of Training High-Quality Technical and Skilled Personnel in Civil Engineering

1.1 Requirements for Accelerating Economic Development and Urbanization

With the continuous growth of China's economy and the change of development mode, economic development and urbanization have become the two core engines of China's current and future development. This development model not only brings huge economic opportunities, but also puts forward higher requirements^[4] for infrastructure construction. Civil engineering, as the material basis of modern society and the key support of economic growth, has been paid more and more attention from all sides. In economic development, civil engineering not only provides the infrastructure needed for production and life, but also plays an indispensable role in absorbing employment, creating value and promoting the development of related industrial chains. From subway, highway to large-scale complex and business center, the success of every civil engineering project can not be separated from the deep participation of technical and skilled personnel. They ensure the quality of the project, realize the design vision, and endow the city with form and life. With the acceleration of urbanization, the demand for civil engineering in densely populated urban areas is more prominent. New residential areas, commercial centers, transportation hubs and public facilities have sprung up like mushrooms after a spring rain, and the technical difficulties and complexity behind them have also increased. This not only requires skilled personnel with rich experience and excellent skills, but also requires them to keep up with the pace of the times, master new processes and technologies, and meet the complex and changeable needs in the process of urbanization. More noteworthy is that with the advancement of economic globalization and technological innovation, the scope and depth of civil engineering in China are also expanding, which is no longer limited to traditional construction and construction, but extends to a wider range of fields, involving more complex engineering technology and cross-domain cooperation. This undoubtedly poses a new challenge to the training of civil engineering technical and skilled personnel in China. Therefore, the cultivation of high-quality technical and skilled personnel in civil engineering has become a realistic demand and long-term strategy to meet the needs of China's economic development and the acceleration of urbanization.

1.2 The Need to Ensure the Quality, Safety, and Innovation of Civil Engineering

In recent years, the quality, safety and innovation of civil engineering have gradually become the focus of heated discussion both inside and outside the industry. Behind this, the significance of training high-quality technical and skilled personnel is particularly prominent.

From the perspective of quality and safety, the success of any civil engineering project can not be separated from the deep participation and fine construction of technical and skilled personnel. As an infrastructure directly serving the public, the safety and quality of civil engineering are directly related to the safety of people's lives and property. Once quality problems or safety accidents occur, it will not only cause huge economic losses, but also lead to irreparable social impact. To ensure the quality and safety of civil engineering, it is necessary for technical and skilled personnel to have a rigorous attitude, profound professional knowledge and rich practical experience. They play the role of "guardian" in the project. Through precise construction and strict quality inspection, they build a solid safety barrier^[5] for each project. In addition, with the rapid progress of science and technology and the change of social needs, innovation in the field of civil engineering has been paid more and more attention. Innovation is not only the adoption of new building materials and construction methods, but also the comprehensive innovation of the whole process of building design, construction and management. This innovative requirement undoubtedly brings new opportunities and challenges to the training of technical and skilled personnel. Only those with extensive knowledge system, open thinking and continuous learning ability can lead civil engineering to the forefront of innovation in this era of change, and meet the needs of society for more environmentally friendly, energy-saving, intelligent and humane civil engineering.

1.3 The Only Way to Improve China's Civil Engineering Level and Comprehensive Competitiveness

Under the background of globalization, the competition between countries is gradually manifested as a contest of comprehensive national strength, in which the level of civil engineering is undoubtedly one of the key evaluation indicators. Improving

the level of civil engineering is not only related to the national image, but also directly reflects the scientific, technological, economic and social progress of a country. In this process, the importance of high-quality technical and skilled personnel is self-evident.

China has a long history of civil engineering, from the ancient Great Wall to the modern super high-rise buildings, bridges across the sea, highway network, all of which are the glorious course and practical proof of China's civil engineering technology. However, with the progress of the times, relying solely on quantitative expansion can no longer meet China's competitive position in the world, and it needs to be deepened and promoted at the qualitative level. Among them, technical and skilled personnel are the core force. It is worth noting that this improvement is not only reflected in the specific architectural practice, but also in the overall progress of architectural concept, design philosophy, material selection and so on. In the current field of civil engineering, it is not only to pursue a single function, but also to take into account multiple factors such as environmental friendliness, humanistic care, sustainability and so on. Behind this transformation is the deep accumulation and unremitting efforts^[6] of high-quality technical and skilled personnel. At the same time, high-quality technical and skilled personnel are also the key factors to promote China's civil engineering industry to be in line with international standards. Under the background of global exchange and cooperation, China's civil engineering industry should not only learn from foreign advanced technology and management experience, but also have the ability to show the unique charm and value of China's civil engineering on the international stage, as well as its contribution and influence to global civil engineering.

2. Problems Faced by the Training of High-Quality Technical and Skilled Personnel in Civil Engineering

2.1 There is a Disconnect Between Theoretical Education and Engineering Practice

In the field of civil engineering education, theoretical education has always occupied the core position. With the rapid development of civil engineering technology and theory, the knowledge imparting in the classroom is becoming more and more abundant and in-depth. Teachers are committed to teaching students the latest theoretical knowledge, the most advanced design ideas and the most modern technical methods to ensure that they have a solid professional foundation. But at the same time, an increasingly obvious problem has gradually surfaced, that is, the disconnection^[7] between this in-depth theoretical education and practical engineering practice has begun to appear.

Students are inculcated with a great deal of theoretical knowledge on campus, covering from basic theory to advanced application. However, when they graduate and enter the actual working environment, especially in large-scale civil engineering sites, they often find themselves facing a series of puzzles and challenges. First of all, the field environment of engineering practice is quite different from the educational background in schools, and it is difficult for students to directly apply the theoretical knowledge they have learned to specific projects. For example, some design concepts may be perfect in theory, but in practical applications, due to various practical limitations and challenges, these theories may no longer be applicable. At the same time, the problems in engineering practice are often multiple and comprehensive, involving knowledge and skills in many fields. However, the education that students receive in school is often one-sided and fragmented, which leads to their lack of overall and systematic thinking ability when facing practical problems, and it is difficult for them to make appropriate judgments and decisions.

2.2 Inadequate Training in Technical Skills in the Current Education System

In today's civil engineering education, the curriculum tends to focus on theoretical teaching, while the training of practical skills is relatively small. Students are immersed in formulas and theories all the year round in school, but there is little in-depth guidance and training on how to apply these theoretical knowledge to practical engineering. In the classroom, students may be taught how to calculate the load of a structure or how to analyze the performance of a material, but they seldom dabble in how to operate on the actual site, how to deal with emergencies, or how to work with other professional workers. From a deeper point of view, the training of technical skills is not only the proficiency of operation, but also the training of soft skills such as how to face practical problems, how to make decisions according to the specific engineering situation, and how to communicate effectively with team members. However, in China's civil engineering education system, there are many

shortcomings in this training. In addition, with the development of technology, the civil engineering industry is constantly introducing new equipment and processes, which require practitioners to have new skills and knowledge. However, due to the lagging update of the education system, many new skills and knowledge are not included in the teaching content, which makes students feel at a loss when facing these new technologies after graduation. This not only limits the career development of students, but also affects the technological progress and development of the whole civil engineering industry.

2.3 There is Still a Gap Between the Educational Concept and Mode and Advanced Countries in Civil Engineering

China's civil engineering education has a long history, but in its development process, it has been influenced by the traditional education model for a long time, which makes a certain gap with the international frontier education concept and model in some aspects. This gap is not only reflected in the content and methods of education, but also in the focus on the development of students' abilities and the overall structure of the education system.

First of all, for the cultivation of students' abilities, the international advanced civil engineering education tends to cultivate students' comprehensive abilities in a more balanced way, not just a single professional knowledge. For example, it emphasizes interdisciplinary learning, attaches importance to the cultivation of engineering ethics and social responsibility, and cultivates students' innovative ability and critical thinking. However, civil engineering education in our country often pays too much attention to the teaching of pure professional knowledge, while neglecting the cultivation of these comprehensive abilities. Secondly, from the perspective of educational methods, many foreign first-class civil engineering professional education institutions have integrated practical teaching, such as project-driven learning, problem-based learning, into conventional teaching activities. These methods encourage students to solve problems in a practical project environment and develop their practical ability and team spirit. In our country, the traditional teaching method is still dominant, and classroom teaching and examination are still the main means of evaluating students, which is difficult to really cultivate students' practical ability. Finally, there are differences in the goals and directions of education. In foreign countries, with the concept of sustainable development becoming more and more popular, civil engineering education has gradually turned to training engineers with sustainable development consciousness, emphasizing the responsibility for the environment and the commitment to society. In our country, this educational concept is still in its infancy, and most of the educational activities are still carried out around traditional engineering skills.

3. Innovative Path and Practice of Training High-Quality Technical and Skilled Personnel in Civil Engineering

3.1 Strengthen School-Enterprise Cooperation

School-enterprise cooperation plays an increasingly important role in the cultivation of high-quality technical talents in civil engineering, which not only provides a real working environment for students to practice, but also builds a bridge^[8] between academia and industry. The purpose of school-enterprise cooperation is not only to meet the immediate needs of enterprises, but also to train students to have the ability and accomplishment needed by the future industry.

Taking a civil engineering university in Wuhan as an example, the school has reached a long-term cooperative relationship with local construction companies, including a project called "construction site classroom". This is not a simple internship or site visit project, but a complete practical teaching system. In this project, students are not just observers, they are given practical engineering tasks and participate in every construction stage with engineers and technicians. In such an environment, students can more intuitively understand and apply the knowledge they have learned in class, and at the same time, they can get timely feedback and guidance from enterprise technicians.

The success of the project lies not only in the valuable practical experience gained by students, but also in the benefits gained by enterprises. Enterprises have the opportunity to directly participate in the training process of talents to ensure that the new generation of engineers can meet the needs of the company. At the same time, enterprises have established closer ties with universities, creating more possibilities for future technological research and development of both sides.

3.2 Actively Promote the Application of Simulation Experiment and Virtual Reality Technology

In the process of cultivating high-skilled talents, simulation experiment and virtual reality technology have gradually

emerged, which provide unprecedented convenience and sense of reality for civil engineering teaching. The introduction of simulation experiment and virtual reality technology enables students to carry out high-risk and difficult field operations in a safe environment, providing them with rich practical opportunities and multi-angle observation points.

In the civil engineering laboratory of a technical college in Nanjing, virtual reality technology is used to construct a real scale bridge construction scene for students. In this virtual scene, students can simulate the construction process of bridges, from site selection, design, construction to inspection. They can personally select materials, calculate bearing capacity, and even simulate and solve unexpected problems that may arise.

This teaching mode not only improves students' interest and participation in learning, but also enables them to apply their knowledge in real scenes and deepen their understanding of professional theory. The application of virtual reality technology not only saves a lot of physical materials and site costs, but also provides students with a zero-risk practice environment, so that they can boldly try and innovate. The promotion of this mode will make civil engineering education develop in a more scientific and practical direction, and meet the needs of the society for high-tech civil engineering talents.

3.3 Actively Learn the Educational Concepts and Modes of Advanced Countries in the Field of Civil Engineering

Under the background of globalization, international exchanges and cooperation in various fields have become an important way of innovation and development. Especially in the field of civil engineering, all countries have accumulated rich experience and advanced technology. Through exchanges and cooperation, we can learn from each other and promote the rapid development of civil engineering education in various countries.

In recent years, an engineering university in Beijing has carried out in-depth cooperation with world-renowned civil engineering universities such as Berlin Technical University in Germany and Stanford University in the United States. This cooperation includes not only the exchange of teachers and the organization of academic seminars, but also the joint development of courses, the cooperative construction of laboratories, and the joint training of postgraduates. Through this in-depth cooperation, students from an engineering university in Beijing have the opportunity to gain an in-depth understanding of the latest technologies, methods and educational concepts in the field of civil engineering in advanced countries. This international educational concept enables students to better grasp the global perspective and strengthen the docking with the international advanced level in the process of learning. Practice has proved that international exchanges and cooperation play an obvious role in promoting educational innovation and practice in the field of civil engineering. Learning from the experience of advanced countries and combining with the actual situation of our country, we can better train high-quality civil engineering technical personnel to adapt to international competition.

4. Conclusion

With the sustained growth of China's economy and the rapid advancement of urbanization, the role of civil engineering has become increasingly apparent, but also brought a series of needs for education and skills training to adapt to the times. In the process of training high-quality technical and skilled personnel in the field of civil engineering, simple imitation and blind following can not bring real leadership and innovation. The real frontier is created in continuous learning, communication and practice, which requires civil engineering education itself to have international concepts and leading technologies, as well as deep self-reflection and innovation ability. Only in this way can we really cultivate civil engineering technicians with solid theoretical foundation and rich practical experience, and make greater contributions to the future construction of our country.

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