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Editor-in-Chief

Prof. Maria Alessandra Ragusa

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Achieving Lifelong Learning through Vocational Education in the Era of Intelligent Education

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Abstract: In the dynamic landscape of modern education, the integration of vocational education and intelligent technologies has emerged as a pivotal strategy for fostering lifelong learning. This essay delves into the synergistic relationship between vocational education and the era of intelligent education, highlighting their collective potential to empower individuals with skills that transcend traditional boundaries.

Keywords: Lifelong Learning; Vocational Education; Intelligent Education

1. Introduction

The current era is marked by rapid technological advancements, giving rise to what is commonly referred to as the era of intelligent education. The emergence of intelligent education, powered by advancements in technology and artificial intelligence, has revolutionized the way we learn and acquire skills. In this era of rapid change, the role of vocational education becomes even more pivotal in facilitating lifelong learning. As traditional educational paradigms evolve, the need for continuous skill acquisition and adaptability becomes paramount. Vocational education, known for its practical and industry-relevant approach, stands as a promising avenue for achieving lifelong learning in this transformative era. Vocational education has the potential to bridge the gap between traditional learning and the demands of an increasingly dynamic job market, enabling individuals to embrace a continuous journey of learning and skill development. This essay delves into the ways vocational education can effectively facilitate lifelong learning within the context of intelligent education.

2. Literature review

The concept of lifelong learning has gained prominence in modern education, reflecting the necessity for individuals to continuously update their skills and knowledge throughout their lives. Vocational education, with its pragmatic and industry-focused approach, has emerged as a vital avenue for fostering lifelong learning. The convergence of intelligent education technologies and the demand for lifelong learning has prompted extensive research and discussion on the role of vocational education in facilitating continuous skill development.

Vocational education's adaptability and responsiveness to changing educational needs have been widely recognized as conducive to lifelong learning. As highlighted by authors such as Bell et al. (2019), vocational education institutions offer modular courses, micro-credentials, and online platforms that accommodate learners' schedules and preferences. These flexible learning pathways empower individuals to acquire new skills, update existing ones, and embark on learning journeys at various stages of their careers.

Researchers like Siemens (2013) emphasize the role of artificial intelligence (AI) in providing personalized learning experiences. AI-driven platforms analyze learners' progress and adapt content delivery to individual needs, thereby fostering self-directed learning and continuous improvement. Virtual simulations and augmented reality applications, as advocated by Kukulska-Hulme *et al.* (2018), offer hands-on practice, enabling learners to engage in experiential learning that mirrors real-world contexts. Authors such as Kruse *et al.* (2020) emphasize the importance of partnerships between vocational education institutions and industries. Research by Mulder

(2017) highlights the significance of recognition of prior learning in acknowledging and accrediting skills acquired through work experience, self-directed learning, and informal education. As discussed by Hinchliffe-McCutcheon *et al.* (2016), vocational education settings emphasize teamwork, communication, critical thinking, and adaptability.

The synthesis of existing research underscores the pivotal role of vocational education in fostering lifelong learning. As lifelong learning becomes an imperative in the modern world, vocational education remains a cornerstone in empowering individuals to thrive throughout their careers.

3. Methodology

Qualitative methods allow researchers to delve into the complexities and nuances of the subject matter, capturing rich and contextually relevant information. This research applied qualitative research methods to explore research question “How can vocational education achieve lifelong learning in the era of intelligent education” The author conducted semi-structured interviews with the stakeholders of a vocational university located at a city in northwest China to explore their thoughts, experiences, and opinions regarding lifelong learning and vocational education in the era of intelligent education. Thematic coding is a widely used qualitative data analysis technique that involves identifying and categorizing themes or patterns within interview data. It helps researchers uncover meaningful insights and draw conclusions from participants’ responses. Thus, this study also follow this way to analyze the interview data.

4. Findings

Through a systematic and rigorous analysis of the interview data, leading to meaningful and well-supported conclusions that contribute to the research objectives. The specific strategies we can use to enhance the lifelong learning in vocational education in new era showed as followings:

4.1 Flexible Learning Pathways

Vocational education’s inherent flexibility enables it to seamlessly integrate with the concept of lifelong learning. The provision of modular courses, micro-credentials, and online learning platforms allows individuals to acquire new skills or update existing ones at their own pace and convenience. Learners can engage in education while juggling work, family, and other commitments, fostering a culture of continuous improvement. This adaptable framework not only accommodates diverse learning styles but also encourages learners to embark on an ongoing educational journey throughout their lives.

4.2 Integration of Intelligent Technologies

In the era of intelligent education, technology plays a pivotal role in enhancing learning experiences. Vocational education institutions can harness the power of artificial intelligence (AI) and digital platforms to provide personalized and interactive learning environments. AI algorithms can analyze learners’ progress, strengths, and areas for improvement, tailoring educational content and pacing to individual needs. Virtual simulations and augmented reality applications further enrich the learning process, enabling hands-on practice and experiential learning that mirrors real-world scenarios.

4.3 Alignment with Industry Demands

A defining characteristic of vocational education is its direct alignment with industry requirements. This attribute gains greater significance in the era of intelligent education, where technological advancements reshape industries at an unprecedented pace. Vocational education institutions can foster close collaborations with industries and employers to ensure that their curricula remain current and relevant. By integrating emerging technologies, industry best practices, and practical case studies, vocational education equips learners with skills that are directly applicable to the rapidly evolving job market.

4.4 Recognition of Prior Learning

To achieve lifelong learning, recognition of prior learning (RPL) serves as a bridge between formal education and real-world experiences. Many individuals acquire valuable skills through work experience, self-directed learning, and informal education. Vocational education can harness the potential of RPL by assessing and accrediting these skills, allowing learners to build upon their existing knowledge. This not only accelerates the learning process but also validates the diverse paths individuals take in their pursuit of skill acquisition, fostering a sense of continuous development.

4.5 Holistic Skill Development

Beyond technical proficiency, vocational education emphasizes the cultivation of soft skills, which are integral to lifelong learning and success. Effective communication, critical thinking, problem-solving, and adaptability are crucial in navigating the complexities of the modern world. Vocational education provides a platform for learners to develop these skills through collaborative projects, teamwork, and practical exercises. The integration of holistic skill development prepares individuals not only for specific job roles but also for the dynamic challenges they may encounter throughout their careers.

5. Conclusion

In the era of intelligent education, the quest for lifelong learning is both a necessity and an opportunity. Vocational education emerges as a key enabler of this pursuit, offering flexible learning pathways, harnessing intelligent technologies, aligning with industry demands, recognizing prior learning, and fostering holistic skill development. Through these strategic approaches, vocational education seamlessly integrates the concept of lifelong learning into its framework, empowering individuals to adapt, innovate, and thrive in a rapidly changing world. As technological advancements continue to reshape education and industries, vocational education's role in facilitating lifelong learning remains resolute, forging a path to continuous growth and success.

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Enhancing Classroom Engagement through Technology: A Case Study of Xuersi

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Abstract: In the realm of modern education, the integration of technology has emerged as a powerful catalyst for transforming traditional classrooms into dynamic and engaging learning environments. This paper provides a concise overview of the multifaceted ways in which technology contributes to enhanced classroom engagement.

Keywords: Technology Integration; Classroom Engagement; Learning Experience

1. Introduction

In the ever-evolving landscape of education, the integration of technology has become a paramount factor in transforming traditional classrooms into dynamic and engaging learning environments. The infusion of technology has the potential to captivate students' attention, stimulate critical thinking, and foster active participation. This essay delves into specific strategies for leveraging technology to enhance classroom engagement, with a focus on the case study of Xuersi, an innovative online education platform. By examining the practices employed by Xuersi, we can gain insights into effective methods for utilizing technology to create an engaging educational experience.

2. Literature Review

Numerous studies underscore the positive impact of technology on classroom engagement. Interactive whiteboards and digital displays, for instance, facilitate dynamic presentations and active participation (Larson, 2017). Online learning platforms, including learning management systems, encourage self-directed learning and provide a platform for collaborative activities (Picciano, 2017). Additionally, digital quizzes, polls, and gamified learning experiences enhance student involvement and motivation (Martin & Bolliger, 2018).

The importance of technology in classroom engagement is substantiated by a wealth of existing research that highlights its positive impact on student participation, motivation, and learning outcomes. Research conducted by Means *et al.* (2013) in a meta-analysis of 99 studies found that technology-enhanced interventions consistently led to increased student engagement and participation. Sharples *et al.* (2019) investigated the impact of mobile learning on engagement and found that the flexibility offered by mobile devices led to increased participation and motivation. Chen *et al.* (2020) explored the potential of VR for engagement and experiential learning.

3. Methodology

3.1 An overview of the case company

Xuersi is a prominent online education platform that leverages technology to create a more enriching and effective educational experience. Through innovative strategies and tools, Xuersi enhances various aspects of education, from content delivery to student engagement and personalized learning. It provides a diverse range of courses to students of varying age groups and academic levels. Its success is rooted in its commitment to harnessing technology to foster meaningful engagement, making it an exemplary case study for exploring how technology can enhance classroom interactions.

Based on the above consideration, this study aims to answer the following questions:

- (1) What are the specific strategies that Xuersi uses to enhance the classroom engagement?
- (2) How does the use of these technology strategies influence its organization, employees, and the students?

3.2 Qualitative Research

To explore the effective utilization of technology for heightened classroom engagement, a qualitative approach was employed. We try to analyze from three perspectives, that is the organization, employees, and students, in order to provide insights into the comprehensive impact of technology. Thus, semi-structured interviews were conducted with managers, experienced educators who have successfully implemented technology-driven engagement strategies, also some students who have already use the technology during their learning process. Qualitative data from the interviews were analyzed using thematic analysis to identify recurring patterns and themes.

4. Findings

According to our analysis of the interview transcripts, four main themes emerged which were showed as following.

4.1 Effective technology strategies to enhance classroom engagement

The findings revealed a range of effective strategies for using technology to enhance classroom engagement.

Interactive Multimedia Content: Xuersi employs multimedia-rich content, including videos, animations, and interactive simulations, to present complex concepts in an engaging and digestible manner. Visual aids not only capture students' attention but also enhance their understanding of the subject matter.

Gamification Elements: Xuersi integrates gamification elements such as quizzes, challenges, and rewards into its courses. This approach transforms learning into an exciting game-like experience, motivating students to actively participate, compete, and earn achievements.

Real-time Progress Tracking: The platform offers tools for students to track their progress in real-time, allowing them to monitor their learning journey and set achievable goals. This transparency encourages a sense of accomplishment and fosters a proactive approach to learning.

Collaborative Learning Spaces: Xuersi facilitates virtual study groups and discussion forums where students can collaborate, share insights, and collectively solve problems. This promotes a sense of community and encourages peer-to-peer learning.

Adaptive Learning Algorithms: Xuersi employs adaptive learning algorithms that analyze individual student performance and tailor content accordingly. This personalized approach ensures that each student receives content suited to their learning pace and preferences.

Educators also emphasized the significance of maintaining a balance between technology and human interaction. While technology is a powerful tool, it should supplement, rather than replace, face-to-face interactions. Furthermore, technology integration required careful planning, ongoing training, and a supportive infrastructure to ensure its effective implementation.

4.2 Integration of technology enhances its organizational efficiency

Through the integration of technology, Xuersi had already improved its organizational efficiency and effectiveness. And this was the foundation to enhance classroom engagement. The concrete improvement is mainly manifested in three aspects.

Scalability: Technology allows Xuersi to reach a broader audience and offer a diverse range of courses to students worldwide, expanding its market presence and revenue potential.

Data-Driven Insights: Through technology, Xuersi gathers and analyzes data on student interactions, preferences, and learning patterns. This data informs strategic decisions, such as content optimization and curriculum development.

Innovation and Differentiation: By employing cutting-edge technologies like gamification and virtual reality, Xuersi distinguishes itself as an innovative educational platform, attracting learners seeking engaging and unique learning experiences.

4.3 Technology-driven approach influences its employees' roles and experiences.

Xuersi promoted classroom engagement through specific technology strategies, and these technology-driven approach has dramatically changed employees' roles and experiences. It is mainly manifested in the following three aspects.

Content Creation and Design: Employees are involved in developing interactive multimedia content, gamified activities, and virtual reality experiences. This creative aspect of their work contributes to engaging course materials.

Adaptive Learning Implementation: Employees responsible for course design and development utilize adaptive algorithms to personalize content. This necessitates expertise in data analysis and instructional design, enriching their skill sets.

Tech Proficiency: As technology is central to Xuersi's operations, employees gain proficiency in using various tools and platforms, enhancing their digital literacy and adaptability in the rapidly evolving educational technology landscape.

4.4 Technology-driven approach significantly impacts students' learning experiences

Students are the main beneficiaries of these technologies, they get a very good learning experience which is mainly manifested in the following four aspects. Naturally, they will get better learning results.

Engagement and Motivation: Interactive multimedia, gamified elements, and virtual reality engage students in ways that traditional methods might not. These tools enhance motivation and make learning more enjoyable.

Personalized Learning: Adaptive algorithms tailor content to individual learning styles and paces, allowing students to learn at their own speed and reducing frustration often associated with a one-size-fits-all approach.

Flexibility: The availability of a responsive mobile app enables students to access content whenever and wherever they choose, accommodating diverse schedules and learning preferences.

Experiential Learning: Virtual reality experiences provide students with immersive and hands-on learning opportunities, enabling them to explore real-world applications of theoretical concepts.

5. Conclusion

The case study of Xuersi exemplifies how technology can be effectively harnessed to create an engaging and interactive learning environment. By incorporating various strategies, Xuersi demonstrates a holistic approach to enhancing classroom engagement, and it has a very positive impact on their organizational efficiency, employee experience and student experience.

Educators can draw inspiration from Xuersi's practices and adapt them to their own teaching contexts. The key takeaway is that technology, when thoughtfully integrated, has the power to revolutionize traditional classrooms and elevate the learning experience to new heights. As we continue to explore innovative ways to leverage technology, we pave the way for a more engaging and impactful educational journey for students worldwide.

Educators must seize the opportunities presented by technology to create enriched and dynamic learning environments. However, it is imperative to remember that while technology is a powerful tool, it is the skilled educator who ultimately shapes the learning experience. Thus, the successful integration of technology relies on a thoughtful balance between innovation and pedagogy, ultimately enhancing the engagement and learning outcomes of students.

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Case Analysis of Teaching Design for High School Function Concept Courses under the Background of the New Curriculum——Taking "Monotonicity of Functions" as an Example

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Abstract: Functions are the core of algebra, and the teaching of function concepts is also the main task of high school mathematics. Students' learning of functions and their concepts shifts from understanding specific quantitative relationships to understanding abstract quantitative relationships. The monotonicity of functions, as the property of the first function that students learn in high school, lays a certain foundation for learning function related knowledge in the future.

Keywords: Function Concept; Instructional Design; Monotonicity of Function

Introduction

The learning of mathematical concepts is the essence of mathematical subject cognition, which lies in grasping what concepts explain, what their upper and lower levels of knowledge are. Concepts progress layer by layer, constantly deriving new concepts through analogy and abstraction. The study of concepts runs through the entire compulsory curriculum, demonstrating its extraordinary status. The "Curriculum Standards for General High School Mathematics (2017 Edition, 2020 Revision)" points out that functions are the most basic concept in modern mathematics, the most basic mathematical language and tool for expressing variable relationships and laws in the objective world, and play an important role in solving practical problems. Functions are the main thread that runs through high school mathematics curriculum. Function monotonicity, as the first property that high school students encounter, is crucial for learning function knowledge well. However, the biggest difficulty of function monotonicity lies in abstracting the concept of function monotonicity using mathematical symbolic language. Therefore, in the context of the new curriculum, this article takes the monotonicity of functions as an example, starting from students' existing cognition and utilizing visual perception of images, to explore how to enable students to abstractly express the concept of functions, thereby better improving students' mathematical thinking and abilities.

1. Analysis of learning content

This lesson is the first lesson of the "Basic Properties of Functions" in Chapter 3, Section 2, Volume 1 of the 2019 People's Education A Edition Compulsory Textbook for Ordinary High School Curriculum Standards. The main content is the formation and application of the concept of monotonicity of functions.

This lesson is based on students' understanding of the basic concepts of functions and studying the laws of function changes. Function monotonicity is a property that students can easily discover from the functions they have already learned. Mastering the relevant knowledge of monotonicity of functions not only lays the foundation for studying the extremum and parity of functions, but also lays the foundation for learning power functions, exponential functions, and logarithmic functions in the future. At the same time, in the process of understanding the definition of function monotonicity, use function images to intuitively perceive the monotonicity of functions, and learn to use symbolic language to describe function monotonicity, improving students' abstract generalization ability; Improve students' logical reasoning ability in the process of using the definition method to prove the monotonicity of functions.

Keynote: Master the Concept of Monotonicity of functions and use definition methods to prove the monotonicity of simple functions.

2. The analysis of the students

Through the learning of function knowledge in junior high school, students have gained a certain foundation in function concepts, and have a visual perception and understanding of the changes in the function images of proportional functions, first-order functions, inverse proportional functions, and quadratic functions.

Students can describe the changes in functions in natural language and have the ability to preliminarily analyze function images. However, students lack the ability to combine numbers and shapes and abstract generalization from special to general.

Difficulty: Can use mathematical language to describe the concept of dynamic monotonicity of functions.

3. Teaching objectives

Understand the concept of function monotonicity, be able to use mathematical symbolic language to describe the concept of function monotonicity, and be able to prove the monotonicity of functions using definitions.

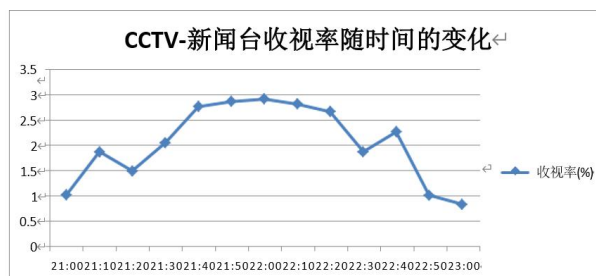
Through the study of graphs and tables, the concept of monotonicity in functions is formed through the integration of numbers and shapes, as well as the ability to generalize from special to general.

Experience the inherent beauty of mathematics through the combination of numbers and shapes, and perceive the charm of mathematical rigor through the transformation of graphic language, natural language, and mathematical symbolic language.

4. Teaching process

4.1 Scenario Introduction

4.1.1 Did everyone watch the opening ceremony on TV? Presumably, the ratings of the program on that day should not be low. Please take a look at the large screen:



Q1: What trends can you observe?

4.1.2 Draw the following functions and observe the pattern of changes in their images

$$\textcircled{1} f(x) = x \quad \textcircled{2} f(x) = -x + 2 \quad \textcircled{3} f(x) = \frac{1}{x} \quad \textcircled{4} f(x) = x^2$$

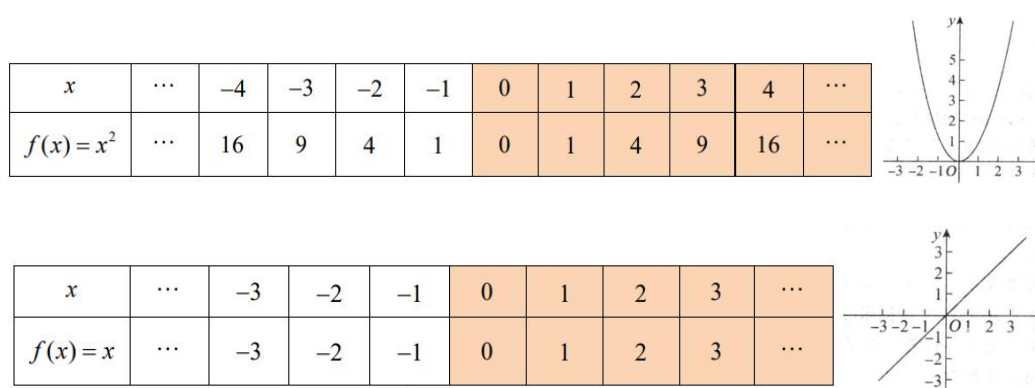
Design Intention: Through function images, students can intuitively experience the trend of function values' increasing 'or' decreasing 'within the defined domain. Students can observe that the changing trends of images for different functions are different; The changing trend of the same function varies across different intervals. The change pattern of the function image is a reflection of the properties of the function, which leads to the topic of this lesson.

4.2 New Course Teaching

4.2.1 Discuss and study $f(x) = x^2$ images and $f(x) = x$ images

Teacher and student activities: The teacher guides students to draw images of $f(x) = x^2$ and $f(x) = x$, complete a table

(PPT) for the corresponding values of x and $f(x)$, and explore what changes are reflected in the two function images.



Design Intention: From form to number, from sensibility to rationality, students can preliminarily perceive that the points on the function image are infinite, and can then induce the arbitrariness of guessing the monotonicity of the function within the interval range.

4.2.2 Constructing the Definition of Increasing Function

Teacher-student activities: Guide students to observe and discuss the function image of the right half of the quadratic function $y = x^2$, identify the two points on the image and their corresponding coordinates, and think about why they need to find the two points.

Q2: How to accurately describe the monotonicity of functions using mathematical symbolic language?

1) Symbolization of 'change'

The function value y increases with the increase of x - when $x_1 < x_2$, $f(x_1) < f(x_2)$.

2) Symbolization of 'intervals'

Monotonicity describes the local properties of a function. For example, studying the image of the right half of a quadratic function actually limits $x > 0$, so it is inseparable from intervals.

Therefore, let the definition domain of function $f(x)$ be D , interval $I \in D$, and emphasize $x_1, x_2 \in I$.

For the two values x_1, x_2 in interval I , when $x_1 < x_2$, $f(x_1) < f(x_2)$ - $x_1, x_2 \in I$, and when $x_1 < x_2$, $f(x_1) < f(x_2)$.

3) Symbolization of 'Any'

Teacher-student activities: Teacher guides students to list the points on function $y = x^2 (x > 0)$, take $x = 1, 2, 3, 4$, and corresponding $y = 1, 4, 9, 16$.

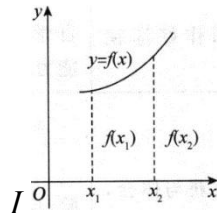
Q3: Can the monotonicity of a function be demonstrated through individual numerical values? Can individual points indicate that the function value y increases with the increase of x ?

The finite or infinite independent variables on interval I satisfy $x_1 < x_2$, and $f(x_1) < f(x_2)$ cannot reflect the essence of "the function value y increases with the increase of x ". Therefore, it is necessary to emphasize the arbitrariness of x_1, x_2 in order to accurately express the feature of monotonic increase.

Any $x_1, x_2 \in I$, when $x_1 < x_2$, has $f(x_1) < f(x_2)$ - $\forall x_1, x_2 \in I$, and when $x_1 < x_2$, has $f(x_1) < f(x_2)$.

Definition: Generally, let the definition domain of function $f(x)$ be D , and the interval $I \subseteq D$. If $\forall x_1, x_2 \in I$, then

$x_1 < x_2$, all have $f(x_1) < f(x_2)$, then function $f(x)$ is said to monotonically increase on the interval

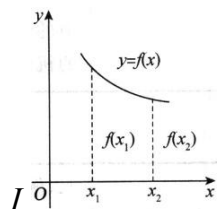


Design Intention: The solution to Problem 2 is a three-step process that allows students to fully participate and use strict mathematical symbolic language to define the entire process of monotonicity of functions. Students can experience firsthand how mathematical concepts go from text to symbols, from intuition to abstraction, and fully understand the construction principles of symbolization of mathematical concepts. At the same time, make students realize that the essence of the concept of monotonicity in functions lies in the impossibility of exhausting independent variables, and guide students to take any two independent variables x_1, x_2 within a given interval.

4.3 Students independently explore the definition of subtraction function

Definition: Generally, let the definition domain of function $f(x)$ be D , and the interval $I \subseteq D$. If $\forall x_1, x_2 \in I$, then

$x_1 < x_2$, all have $f(x_1) > f(x_2)$, then function $f(x)$ is said to monotonically decrease on the interval



Design Intention: By using analogical methods, students can independently derive the definition of a decreasing function. On the one hand, the definition of an increasing function has been strengthened, and the differences between the definitions of increasing and decreasing functions have been identified to experience the expansion and improvement of mathematical concepts; On the other hand, it can reflect the subjectivity of students and emphasize their independent thinking and meaning construction.

4.3.1 Consolidation exercises

1. Research on Function Monotonicity and Monotonic Interval Based on Definition.

$$1) y = |x|$$

$$2) y = \frac{1}{x}$$

2. Prove monotonically increasing function $y = x + \frac{1}{x}$ on interval $(1, +\infty)$ according to the definition.

3. Study the monotonicity of function $y = x^2$ according to its definition.

Design Intention: The three questions go from shallow to deep, progressing layer by layer. The first question can deepen students' understanding of the concept of monotonicity of functions; The complete answer process for question 2 was jointly completed by teachers and students, and the teacher played a good demonstration role; The third question was independently discussed and completed by students, reflecting the people-oriented student view. This question was also classified and discussed, which can improve students' mathematical logical thinking. In addition, after students have mastered the use of mathematical symbolic language to describe the monotonicity of a function, the third question immediately proves the monotonicity of the function image using the definition method. This corresponds to the natural language description of the function change pattern of $y = x^2$ before and after.

4.3.2 Brief summary

- 1) Talk about the knowledge you gained in this class?
- 2) What methods and processes did you use to learn today's knowledge?
- 3) Are there any unresolved questions?

Design Intention: Firstly, students summarize this lesson, construct the knowledge structure independently, and then the teacher summarizes it to make the knowledge more complete and systematic; At the same time, students raise questions, and the teacher triggers students to think and expand, laying the groundwork for the next class.

4.3.3 Assignment

Exercise 2, 3

What other methods can be used besides observing images and defining functions to determine their monotonicity?

Conclusion: The teaching of mathematical concept courses is an important component of high school mathematics teaching. Teachers should pay special attention to the use of teaching methods and innovative use of textbooks, and design the teaching of concept courses based on students' cognitive patterns, in order to achieve the goal of improving students' mathematical thinking.

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Digital labor under the Threshold of Digital Media

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Abstract: Digital labor, as a new theoretical form of "audience commodity theory" in the digital media era, represents a new form of production and labor. This paper explores the unique features of digital labor in labor form, labor products and labor time, and combining Marx's theory, it further reveals the alienation and exploitation of human social relations, emotional value and social class in the process of digital labor, and finally makes suggestions on the unequal relationship between platform and workers in the process of digital labor.

Keywords: Digital labor; Digital Capital; Labor Theory of Value; Non-Employment Exploitation

1. The origin and development of digital labor theory

In the early studies of the critical school of communication science, the labor issue was the research blind spot. In 1977, Dallas in the spread: western marxist blind spots "audience" concept, think the audience constitute goods, the media audience attention as a commodity sold to advertisers, audience attention advertising is a kind of labor, labor issues became the focus of academic debate, laid a foundation for the study of digital labor. Domestic research is the extension and development of the study on the concept, expression, ideology, labor process and alienation of foreign digital labor, but the research direction is slightly different. Foreign main research general digital labor of Internet users, which is different from the traditional employment relationship of free labor, and domestic academic circles focuses on the analysis of professional labor in Chinese Internet society, the digital labor is paid, still can use the framework of capital employment labor analysis, for most of the Internet users are involved in free labor research still need to deepen.

2. The characteristics of digital labor in the Internet era

2.1 Form of labor: production and consumption symbiosis

Free labor for Internet users is the form of digital labor studied in this paper. Users in the process of using digital media, the production of information content free to create surplus value for the platform, the free information production has duality, the user plays the dual role of producers and consumers: one is as content "producer", the user's original content of production release, share resources dynamic, thumb up comments forward behavior to platform provides a large amount of information data, platform is not directly produce information content, but have all information resources, platform by providing technical support and services for massive UGC data and user information. The second is digital work as a media "consumer". In order to meet the needs, users' a series of behaviors on the Internet provide the Internet platform with data and attention that can be used for commercial development. The platform monitors and collects information about users' preferences in video watching, article reading, online chatting and other behaviors, and sells these information to advertisers as commodities, so as to provide data support for advertisers to accurately push advertisements.

It can be seen that not only the products of the users' labor will be commercialized, but the users themselves will also become the goods sold to advertisers. Take Bilibili as an example, in 2016, the user contributed content accounted for more than 90%; in the fourth quarter of 2020, the average monthly active UP of B station was 1.9 million, the average monthly video contribution reached 5.9 million, and the monthly active users reached 202 million. The surge of users not only produced a large number of original community content, but also brought the rapid growth of advertising business. Internet users play the dual role of network information producers and consumers. On the surface, the platform is a content provider and the users are the consumers, but in fact, the content producers

are the majority of Internet users. The information content of the platform will not be consumed by consumption or possession, but will be continuously produced, but it also covers the employment relationship between producers and consumers in the traditional sense, blurs the boundary between traditional production and consumption, and thus depriving the interests of producers.

2.2 Labor products: non-material and emotional coexist

The Marxist school of autonomous doctrine believes that the contemporary labor mode has been transformed into non-material labor. Molz Orazarato first put forward the concept of "non-material labor", which refers to the labor that produces cultural content and commodity information. The products of labor under the traditional employment relationship are mostly material forms, while the products under the Internet digital labor are usually non-material content based on people's personal life, experience and interest sharing. In the era of mass media, mass media attracts the attention of the public by producing professional content, and the attention and loyalty of audiences is the labor force paid in the process of watching. In the era of several media, the user the labor subject not only attention, the content of creative production of information, also into their cognitive and emotion, the user's digital labor process is often the interest and knowledge, emotion and experience, social relationship, therefore, the Internet enterprise to the user's labor process and behavior path for data tracking and analysis, can often be very accurate for user portrait.

While expressing themselves on social media platforms, users will actively invest in their emotions and labor to build their own social identity in order to build their own social circle and maintain social relations. Therefore, the labor process of Internet users is also the process of their emotional expression and exchange. Relying on technical services and resource support, the platform encourages and guides labor subjects to actively conduct self-expression and emotional investment, so as to complete the commercialization and monetization of labor products. From each Internet platform slogan can find out, such as netease news "attitude", "B stand" what are you interested in video in B station ", douban" our spiritual corner " and so on, these feelings concept type slogan to convey to the user the spirit of the brand and advocate, encourage users through the platform reveal personality, construct self, seek recognition, so as to deepen the platform and user between spirit and value identity.

2.3 Labor time: the bridging of the boundary between production and leisure

Inspired by the Marxist theory of labor reproduction, Dallas Smaz believed that people are also reproducing labor when they relax and relax. Previous view that the audience use media to take the initiative to meet the demand, and to review the relationship between the audience, labor and platform, the researchers found that the alleged, meet the demand of the audience platform is often guide the audience to build false desire, and often through the way of emotional connection constantly attract audience reproduction data flow, through virtual emotional satisfy let audience become a part of labor production. As of December 2020, the scale of Chinese Internet users reached 989 million, mobile Internet users accounted for 99.7%, and the per capita weekly Internet time was 26.2 hours. The huge digital society composed of nearly one billion Internet users marks that all aspects of their production and life are accelerating to connect with the Internet. When netizens use the media for leisure and entertainment or seek for self-worth and identity, they enter into the process of information production and labor in the Internet industry.

"Labor hours are the measure of social value production in social media."Fox thinks the more time people spend on social media, the longer he works, and the more data they create for advertisers. The time of users' social media use is commoditized, not paid but privatized by capital, and labor exploitation occurs. From the marxist theory of surplus value, production surplus value has two ways: one is to extend the labor time, digital media age, the whole society is a big factory, Internet users labor broke the boundaries of time and space, even leisure time users are produce surplus for Internet companies value; Second, increase labor intensity. With the development of information technology, the working place, time and way of workers are no longer fixed. Users spend more and more time and energy online to produce massive data products, and participate in the value production of capital through various ways, which also makes more Internet users become digital labor.

3. The exploitation and alienation of users' digital labor process

Marx's labor theory of value points out that capitalists rely on the means of production and squeeze the surplus value of workers for labor exploitation, showing the surplus labor or unpaid labor in the form of employment with wages as remuneration, which covers the essence of the exploitation of the surplus value of workers. Marx once proposed four forms of labor alienation, which Fox agreed that digital labor contains exploitation and that it means "four alienation"; Andreyevich and others used the concept of alienation and

exploitation to discuss the free digital labor of the Internet; the latter also revealed that the degree of exploitation of media users is not significantly different from that of industrial capitalism.

3.1 The commercialization of social relations under reproduction

Internet platform by stimulating users diversified material and spiritual needs, let the user browse information behavior become labor practice, user thumb up, forwarding, comments, micro labor in express themselves at the same time, the social relations network also be included in the platform of data production and consumption, completed the process of value creation and economic production. On the one hand, under the social background of rapid development of new urbanization, rapid flow of urban and rural population and atomization of interpersonal relations, mobile social platforms platform meet the psychological needs of users to communicate with strangers. Xu Dehua and Liu Ting think based on mobile social platform relationship should be summarized as a weak relationship, but the "weak" relationship "clearly shows the nature of the" strong relationship ", the relationship can not only help urban users expand their circle to obtain information and job opportunities, and can also help them to find the right stranger, and establish close relationship, interest in social interaction, meet the user's emotional needs. Internet platform, on the other hand, is the use of users to carry out the social psychological demand and demand to achieve the purpose of the profit, the user to network social communication production of content and data become platform party unique information content, platform continuously provide economic benefits, platform will also to user data and advertisers value exchange, through the user social relations.

It is worth noting that fox, Anderson, brits, and other scholars with "public self monitoring" "participatory surveillance" to reflect the network age users digital labor consciousness, negative Internet research "participatory democracy" in "citizen voice" optimism, from the perspective of political economy research calls for users alert to digital capitalism of the network of public commercial erosion, reflect on network information age users of alienation and commercialization.

3.2 Emotional exploitation under labor alienation

Fox pointed out that digital labor is based on the four alienation of human beings, that is, the alienation of human itself, the alienation of labor tools, the object of labor and the products created by it, among which the alienation of human itself is the most noteworthy. In the view of some scholars, the development of media technology services has brought about the prosperity of participatory culture and promoted the equal and democratic participation of netizens in all aspects of society. However, it cannot hide behind the hidden extraction and exploitation of Internet labor value, and the subject of emotional alienation, under the platform capital operation, although people still willing to put all their energy in the positive in the media platform actively construct self image and maintain social relations, but as most netizens said "wake up the first thing is to open the phone", people gradually become a "half unconscious, half forced, involuntary" state of labor, in the process of use does not get the spiritual satisfaction, but present more addiction, emptiness, the alienation of loneliness and anxiety. With the emotional cultural symbols and labor products, become the influence of people and reality of power, people in the real world, the loss of identity, and even exacerbated the social relations between people and emotional alienation, become contradiction and conflict between groups, group polarization phenomenon intensified important factors.

3.3 Social class solidification under capital accumulation

Capital includes economic capital, cultural capital and social capital. The transformation between these three factors reveals the inequality between the platform and the workers from the perspective of digital labor. first, Internet enterprises can effectively transform economic capital into cultural capital and social capital; next, In the process of the initial cultural capital accumulation, The amount of cultural capital often plays a decisive role in whether the platform can win a place in the "field" where "multiple forces compete", While accumulating the cultural capital, The platform also transforms this capital into economic capital and social capital, To obtain economic benefits and attract more users' attention and participation with the unique community culture; last, The formation of an "explanatory community" that gathers people's common interests and views has accumulated more social capital for the platform, And constantly bring economic and cultural benefits, Although the use value of social media is realized in the user participation process, But platforms have control over all aspects of information, technology and rules, Thus extracting the residual value of the user data.

In the era of digital economy, digital network media and technology are reshaping new forms of social communication. People

use social media to share views, exchange information, exchange emotions, and conduct self-expression and social communication. However, people's class relations are also facing new hierarchical differentiation in the Internet environment. Get high attention opinion leaders have a strong influence and public opinion guide, and the bottom of the workers rarely get attention and remuneration, which makes the digital workers between economic benefits, cultural capital, social class increasingly inequality, platform of entry and resource support will further aggravate the phenomenon of cultural capital distribution imbalance, the rich richer, the poor poorer. It is difficult for the bottom workers to exchange and communicate through value resource acquisition and social resource possession. As time passes, they are more accustomed to network participation in social classes consistent with their own capital level, and gradually adapt to the current situation.

Epilogue

Returning to the most basic question of "audience labor theory", "whether the audience labor participates in value production", there is no doubt that the audience labor in the era of digital economy is productive, and intellectual knowledge, emotional experience, social relations and other factors have gradually become the tools and elements for users to participate in value production. On the one hand, we should actively affirm the value of Internet platforms to meet people's needs to establish social relations and realize self-worth, and have the potential to correct the confluence of individualism and collectivism; on the other hand, we should be cautious about the free possession and exploitation of the platform. For the emerging problems, we can start from four aspects: first, to promote the study of alienation and exploitation, strengthen the government's supervision of the digital platform employment system; Second, the use of artificial intelligence technology to improve productivity, to liberate and alienated workers, to realize the gradual transformation of the digital economy development model; Third, using the advantages of blockchain technology immutability and imforgerability, tracing the source, location and fair distribution of digital labor producers, realize more work and more gain; Fourth, the establishment of a shared digital media platform, exploring new types of labor organization relations, improve the data management system, regulating the data acquisition and use of internet platforms through legal and administrative means, in the process of digital labor, the platform and users will jointly share the fruits of digital labor.

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The School of Marxism

A Study on the Sinicization of Marxism

Research on the Dilemma and Opportunities of Marxist Mass Communication from the Perspective of New Media

Common Research on Transformation and Development of Newly Built Undergraduate Colleges in Sichuan

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Abstract: In 2015, the newly built undergraduate colleges have accounted for half of the ordinary undergraduate colleges. Through the investigation, it is concluded that the newly built undergraduate colleges in Sichuan have the following commonalities in the transformation: the school positioning of "application-oriented"; The embodiment of the new university spirit of "serving local construction"; The talent training goal of "innovative and composite applied talents"; Flexible personnel training curriculum system.

Keywords: Newly Built Undergraduate Colleges; Talent Training; School Positioning; Practical Teaching

Introduction

The term "newly established undergraduate institutions" refers to those approved by the Ministry of Education to be established after 2000. In a short period of 16 years from 2000 to 2015, there were 678 newly built undergraduate colleges (including independent colleges) in China, accounting for 55.6% of the country's general undergraduate colleges and universities, accounting for "half of the country's undergraduate colleges and universities".^[1]

In June 2014, the Ministry of Education and other six departments issued the Plan for the Construction of Modern Vocational Education System (2014-2020), which clearly proposed to "encourage the establishment of applied technology colleges and universities, and build them into a new type of university that directly serves regional economic and social development, focuses on the organization of undergraduate vocational education, and integrates vocational education, higher education and continuing education". This has opened^[2] a new stage of transformation for newly built undergraduate colleges and universities. "The goal orientation and development trend of the transformation of newly built undergraduate colleges are to build a new college form, that is, a new type of university. Compared with traditional research universities, a new type of university is a new type of university with newly built undergraduate colleges as the main body, application-oriented as the core feature and educational philosophy, closely related to local economic and social development, and fundamentally oriented to the cultivation of high-quality application-oriented undergraduate talents. "From the establishment, development to transformation and development of newly built undergraduate^[3] colleges, it takes less than 20 years. It can be said that in the stage of "crossing the river by feeling the stones", in such a critical period, it is very necessary to clarify the commonalities of the newly built undergraduate colleges in the development process, and provide a broader connotation for the "new" of the newly built undergraduate colleges. Through sorting out the characteristics of the transformation and development of the 27 newly built undergraduate colleges in Sichuan, it is found that there are commonalities in the following aspects.

1. School positioning-- application-oriented

Newly built colleges are often located in non-provincial cities. Their positioning, development mode and talent training goals will directly affect regional economic development and strategically influence the development pattern and trend of China's higher education popularization. In the Index System of Evaluation of undergraduate teaching level in Colleges and Universities published by the Ministry of Education, the connotation of school positioning is divided into: type positioning, target positioning, level positioning, subject specialty positioning and service orientation positioning.

At present, the classification of higher education in countries around the world is based on the International Classification of Education Standards (2011) issued by UNESCO. ISCED (2011 edition) points out that "higher education is based on secondary education and provides learning activities in specialized educational disciplines. It aims at highly complex and specialized learning. Higher education includes ISCED levels 5, 6, 7 and 8, which are labeled as short-term higher, Bachelor's or equivalent, Master's or equivalent, and Doctor's or equivalent respectively. Level 5 is "short-term higher" education, usually designed to provide participants with professional knowledge, skills and abilities, and lasts at least two years. Usually, these courses are based on practical and specific occupations, preparing students for the Labour market. Level 6 courses, or "bachelor's or equivalent", are usually designed to provide participants with an intermediate level of academic/or professional knowledge, skills and abilities leading to a first degree or equivalent qualification. Level 6 courses are generally theory-based, but may include a practical component, teaching the latest state of the art in research and/or best professional practice. The duration of the course is 4 years. This is consistent with the type orientation and training goals of the 27 undergraduate colleges in Sichuan province, that is, to cultivate application-oriented talents with intermediate academic or professional knowledge and skills.

The "applied" orientation of the 27 newly built undergraduate colleges in Sichuan Province not only accords with the International Standard Classification of Education (2011 edition), but also accords with the current situation of higher education in China and the social demand for education.

2. The "New University Spirit" -- "Service"

The traditional university spirit includes two aspects: On the one hand, it mainly focuses on the eternal values of freedom, democracy, science, humanities and criticism, emphasizing that the university maintains a transcendent attitude toward the secular world, and criticizes the society calmly and leads the direction of the society as the conscience and elite of the society. On the other hand, there is also a tendency to "spiritualize" the understanding of the university spirit to a certain extent, simplifying the university spirit as a noble and spiritual thing, denying the material, utilitarian and vulgar things. The mission of a university is the embodiment of the spirit of a university. The 27 newly built undergraduate colleges in Sichuan reflect the spirit of different traditional university education in the expression of their mission, that is, the "new university spirit". "New university spirit" is in the same vein as the traditional university spirit, but it also has a broader connotation, which is the spirit of "service" or "participation", that is, "serving the local" and "participating in the local construction". Based on the mission and pursuit of the 27 newly built undergraduate colleges, the newly built undergraduate colleges attach great importance to the function of "serving society and local areas".

3. Types of talent training orientation -- innovative, composite applied talents

The talents cultivated by higher education can be generally divided into academic type and applied type. According to the data, at present, the ratio of academic talents and applied talents is roughly 1:4. That is to say, social development and economic construction need a large number of applied talents. In addition to "applied talents", "innovation" and "compound" are high-frequency words in the talent training orientation of newly built undergraduate colleges in Sichuan.

3.1 Innovation

Application-oriented undergraduate talents are not equivalent to traditional subject-oriented talents, nor to skilled talents in the general sense, but a new type of talents with both technology and professional theories, and talents with harmonious development of knowledge, ability and quality.^[4] In the orientation of talent training, many newly built undergraduate colleges in Sichuan have put forward the goals of "innovative spirit" and "innovative thinking".

3.2 Interdisciplinary talents

Compound talents refer to talents who have the basic knowledge and basic ability of two (or more, but generally two) majors (or disciplines). The knowledge structure and ability structure of compound talents have the characteristics of multiple integration. This integration is not a simple addition of a variety of knowledge and ability, but an organic combination and mutual penetration between knowledge and ability, so as to achieve a state of integration, forming a variety of knowledge, ability and quality integration and play a comprehensive role. In order to meet the needs of local development, compound talents have become an urgent demand of the society. The new undergraduate colleges in Sichuan all put forward the characteristics of "compound" in the orientation of talent training.

4. Talents training curriculum system -- flexible

Application-oriented undergraduate colleges and universities do not require a comprehensive system of knowledge, but the best combination of theoretical knowledge and practical ability. In the Opinions on Deepening the Reform of Teaching and Training quality talents to meet the needs of the 21st Century, the Ministry of Education put forward the concept of "weakening professional consciousness, broadening the foundation, strengthening quality education and ability training". The curriculum of newly built undergraduate colleges can neither copy the curriculum system of "emphasizing subject knowledge and theoretical innovation" of research universities, nor copy the "skill-based" curriculum system of higher vocational colleges, but explore a "new" curriculum system, that is, under the premise of ensuring basic knowledge, increase the space for the choice of professional courses. So as to provide more "flexibility" for students to "specialize in their professional trades".

Newly built undergraduate colleges, as a fresh force for cultivating high-quality applied talents, are still in the stage of transformation and development, and many aspects are still being explored, especially in the construction of dual-professional and dual-ability teachers, connotation construction and the mining of school characteristics.

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From the Teaching reform project of Sichuan University of Arts and Science: Exploration of Application-oriented curriculum Construction--Based on the practical research of "Art therapy" curriculum reform (2020JZ046)phrased results.

County-Level Integrated Media Center Promotes Cultural Inheritance and Innovation with "Short Video" as the Carrier

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Abstract: As a public opinion position to convey the spirit of the Party Central Committee and national policies, the Integrated Media Center plays a vital role in publicity work. However, there are also some problems in the process that hinder further development. The integrated media center has the advantages of understanding the direction of publicity, familiar with the local economic and cultural development, and mastering the production of short videos. If the integrated media assists in the production and promotion of short videos, it will have better publicity effects. This article analyzes the problems in the promotion process of short videos for rural users, in order to establish effective working ideas for the media center and promote local cultural inheritance and innovation.

Keywords: County-Level Integrated Media; Rural Revitalization; Short Video; Cultural Inheritance

Introduction

The "three rural" issues have always been fundamental issues related to my country's national economy and people's livelihood, and the rural revitalization strategy has been an important task in rural work since the 19th National Congress of the Communist Party of China. Rural revitalization is a comprehensive revitalization that requires coordinated economic, political, cultural, social, and ecological civilization construction in rural areas. Cultural revitalization is an important part of the entire work, providing development soil for economic development and rural ecological construction. This paper takes the work of integrated media as the starting point, and under the background of rural revitalization, according to the status and role of integrated media in rural revitalization, combined with the current "short video" popularization and use among rural users, it discusses effective And the specific work ideas with strong operability can bring sustainable development to the cultural inheritance of rural areas through "short video" method.

1. Problems existing in the practical work of county-level integrated media

In terms of platform operation of county-level integrated media centers, they are mostly operated with the help of higher-level media platforms, while provincial-level platforms hardly involve issues related to "agriculture, rural areas and farmers". As a county-level integrated media center, it lacks a lot. Function. For example, the county-level convenience services, agricultural technical services, and farmers' employment related to the needs of the county-level people are still relatively lacking or even completely blank. In addition, there is a serious lack of services. At present, many county-level integrated media centers still habitually focus on setting up models, reporting events and leadership activities in publicity. They do not pay much attention to cultural construction, rural B&Bs, etc. In terms of service content, Most of them stay at the level of "facing the top", but the tendency of "facing the bottom" is not high.

2. Difficulties faced by rural cultural inheritance

2.1 The development of the external media environment is backward

Some folk tales, traditional handicrafts, proverbs and songs, etc., are mostly spread among people within the countryside for a long time. Due to the limitations of time and space, the rich rural cultural content is not connected with the outside world, resulting in the interruption of the dissemination process and the inability to carry out wider cultural promotion and inheritance.

2.2 Rural cultural facilities are backward

Many rural cultural facilities, such as rural cultural stations, libraries, etc., mostly rely on local financial appropriations to maintain their operations, and these facilities often have concentrated investment in the early stage, good maintenance and operation, and increased use costs in the later period, while investment has decreased, resulting in Many cultural facilities are unable to operate normally and have become empty shells.

2.3 The gap between urban and rural areas creates barriers to cultural communication

Within counties and townships, interpersonal communication dominates, while mass media relies more on the mainstream culture of the city. Therefore, the content, methods and channels of mass communication do not pay more attention to the cultural needs of rural residents. Without strong intervention and guidance, the barriers to urban and rural cultural communication will become more and more obvious, further affecting the dissemination and inheritance of rural culture.

3. Difficulties faced by using short videos to inherit rural culture

3.1 Homogenization of subject matter and content

Short videos with the theme of "agriculture, rural areas and farmers" and rural culture, whether they are creators with a large number of fans or newcomers, most of the themes they create are rural beauty, farm food, pastoral life, etc. In particular, new creators are often accustomed to imitating or even copying popular works, resulting in more homogenization of themes and content.

3.2 The quality of creators needs to be improved

The popularization of the Internet in rural areas, the rapid expansion of the number of mobile users, and the low entry threshold for short video creation have stimulated the active participation of more rural residents. From another perspective, with the stimulation of traffic and number of fans, Under the current situation, due to the limitations of cultural level and weak ideology, video contents such as plagiarism and vulgar content have appeared, which is contrary to the revitalization of rural areas and the promotion of rural culture.

3.3 "Seeking differences" and "seeking strangeness" impact on rural culture

Stimulated by the number of traffic and fans, many short video creators deliberately vilify and distort some bad habits and bad habits in rural areas in order to gain attention by pretending to be ugly and making pranks, which has had a negative impact on the promotion and inheritance of rural culture.

3.4 "Information cocoon room" restricts large-scale promotion of rural cultural content

The short video platform is characterized by fast communication speed and high platform openness, which can quickly create hot topics and content. However, in order to retain users for a longer period of time, various short video platforms currently push content to users based on "algorithm recommendations". And because some spoof, extreme, and exaggerated content objectively have stronger dissemination and promotion power, more and more such bad content is pushed to users, and users continue to refresh and watch these negative content. From the perspective of video producers, more inferior content will be produced in the one-sided pursuit of traffic and profits. From a more macro point of view, "algorithm recommendation" has contributed to the formation of "information cocoon room". The limitations of short video users' thinking and vision will be intensified. It hinders the spread and inheritance of rural culture through short videos.

4. Insufficient economic and technical support weakens creators' enthusiasm for continued creation

There are two problems that cannot be avoided in the development process of short video creation. The first is the quality of the content, and the second is the traffic problem. Many content producers believe that they need to "buy traffic" to obtain traffic, which undoubtedly significantly increases production costs. The income of short video creators in rural areas mostly depends on the

platform's subsidies, but it is far from covering the creator's input cost, causing them to need to create at their own expense, causing economic pressure and seriously affecting the enthusiasm of creators. Especially in the early stages of creation, individual creators are unable to relieve their pressure through financing. Although ad placement and pre-roll ads are one of the main ways to generate income for short videos, it is difficult to have a stable income in the initial stage of low traffic and few fans.

5. The task requirements and development ideas of the county-level financial media center to promote short videos for cultural inheritance

Considering that the current county-level financial media center needs to better shoulder the important historical mission under the new situation and new tasks. Responsibilities need to be shifted from focusing more on media attributes to comprehensive attention that takes into account social governance attributes, community, and rural aspects. In the new stage of development, it is especially important to see that the dissemination and inheritance of rural culture is the internal driving force for development and the driving force for innovative development.

5.1 "Content" promotion, innovation and gatekeeping

5.1.1 "Content" boost

Rural culture is a synthesis of the achievements of material civilization and spiritual civilization formed under a long-term social and historical background, with unique cultural characteristics of rural areas. For short video creators from rural areas, although they live in this land, due to their limited cultural level, coupled with their lack of grasp of the characteristics and direction of new media communication, they cannot comprehensively and accurately use the short video method. Promote rural culture. For the Media Center, on the one hand, it understands the communication requirements and communication ideas, and at the same time, because of its location "up to the center, down to the people", it has the inherent advantage of being familiar with rural culture. In addition, it can also provide guidance on shooting and production techniques to rural short video creators.

5.1.2 "Content" innovation

The current short video content related to "three rural issues", rural revitalization, and rural culture is too homogeneous, lacks innovation, and is seriously plagiarized, which has caused users' aesthetic fatigue. Therefore, county-level financial media needs to give full play to the responsibility of content innovation, discover content with local characteristics according to local conditions, enhance the diversification of content, and guide creators to conceive and create content from the perspective of users.

The county-level integrated media center can comprehensively use a variety of information dissemination technologies to fully integrate the information and resources of traditional media and various types of new media, and provide content support for the innovative creation of short video content. It can also integrate more diverse media forms and content such as short videos, webcasts, and creative posters to expand content acquisition, release, and publicity channels, thereby enhancing the creativity and innovation of short video content.

5.1.3 "Content" control

Short videos bring new development opportunities to the countryside, enhance the vitality of the countryside, and provide a good booster for the revitalization of rural culture. Through short videos, the rural landscape, local customs, etc. are disseminated, arousing rural residents' confidence in rural economy, culture and landscape, arousing urban residents' yearning for rural life, and soothing the homesickness of wanderers.

5.2 Assist short video creation and communication with other industries for mutual benefit

5.2.1 Promote short video creation and dissemination

The short video platform recommendation algorithm limits the expansion of the scope of short video dissemination, and the cultural gap between urban and rural areas also limits the increase in the short video audience. Convergent Media integrates various types of media. Compared with ordinary short video creators, it has a relatively complete communication matrix. It can take advantage of this advantage to provide multi-angle information content supply and promotion for short videos.

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Group Processes in School Bullying and Prevention and Intervention

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Abstract: In recent years, incidents of school bullying have been on the rise, attracting increasing attention from society. School bullying refers to the repeated and sustained use of force or coercion by individual or group of students to oppress other students in terms of power or status, resulting in many physical and psychological problems for the victims. This paper introduces the definition, classification, role types, and the impact on victims, as well as interventions for school bullying. Studies have shown that school bullying can have negative psychological consequences for victims, such as anxiety and depression, making timely intervention extremely important. Intervention measures include educating the active perpetrators, victims, and bystanders. In particular, the "STAC" course is an effective way to educate bystanders. In summary, school bullying is a problem that requires timely intervention, and it requires joint efforts from schools, families, and society to solve.

Keywords: Students; School Bullying; Intervention

1. Overview of School Bullying

Currently, there is no clear and unified concept of "school bullying" in the academic community. According to the definition of school bullying defined by Norwegian professor Olweus (1978), it generally needs to meet three criteria: (1) intention to harm; (2) repetition and long-term duration; and (3) unequal power relations. Based on these three criteria, the definition of school bullying used in this article is: "When a student is repeatedly and persistently subjected to negative behavior from other students, either individually or in a group, it is considered as school bullying."

Professor William Smith categorized bullying into five types in the first edition (2008) of "The bully in the mirror". He then further subdivided them in the third edition (2019) by adding two types: gender bullying and racial and cultural bullying. This article uses the classification of the third edition (2019), which includes physical bullying, verbal bullying, social bullying, psychological bullying, cyberbullying, gender bullying, and racial and cultural bullying.

As of today, school bullying remains a common problem worldwide, although there has been a decreasing trend with the advancement of time and improvement of laws and regulations, school bullying still occurs widely in various countries. The definition of school bullying is still difficult to define, and it is often mistaken as normal games or play between students, making it difficult to solve the problem in a timely and effective manner. School bullying not only causes psychological or physical harm to the victims but can also escalate to become a criminal offense and encourage the occurrence of other bullying behaviors.

According to relevant research, the impact of school bullying on victims is diverse. Adolescents who are bullied in schools are more likely to experience psychological and physical problems, such as depression, anxiety, insomnia, social difficulties, and learning difficulties. In severe cases, victims may exhibit self-harm or suicidal behavior. Victims who suffer from long-term bullying may develop various psychological disorders, including depression, anxiety, autism, post-traumatic stress disorder, and antisocial personality disorder, as well as various physical illnesses such as headaches, muscle tension, and stomach pains. These consequences can have a lifelong impact on the victims' health and quality of life. Therefore, intervening in school bullying behavior can not only help bullies realize the errors in their behavior and correct them in a timely manner but also prevent or reduce harm to victims and increase their self-confidence. For schools and society, intervening in school bullying can improve school safety and students' learning efficiency, enhance social cohesion, and promote the harmonious development of schools and society.

2. The roles of school bullying

In the context of school bullying, three different roles are usually involved: the victim, the bully, and the bystander. Taiwanese scholar Fu-Yuan Weng (2013) divided the roles in school bullying into six categories: Bully, Accomplice, Bully-victim, Victim, Disengaged onlooker, and Active onlooker. American psychologists Dorothy Espelage and Susan Swearer (2010) classified the roles into six categories as well: Aggressor, Assistant, Supporter, Victim, Witness, and Disengaged Bystander. Based on the research results of both Western and Taiwanese scholars, this paper divides the roles in school bullying into five categories: Bully, Assistant, Victim, Disengaged onlooker, and Active onlooker. By intervening with neutral bystanders, they can be transformed into active bystanders who can effectively intervene in school bullying.

(1) Bully

Bully refers to a student who consciously bullies or attacks others, possibly using physical, verbal, or digital violence. They play a leading role throughout the bullying behavior and sometimes even direct and control the behavior of accomplice aggressors.

Bullies can be classified into two types based on the form of bullying: emotional bullies and behavioral bullies. Emotional bullies typically use non-physical methods to attack their victims, such as spreading rumors, ignoring or excluding them. Behavioral bullies are usually physically strong and powerful and can benefit directly from physically aggressive behavior, so they mainly use physical methods to attack, such as shoving, hitting, and taking possessions by force.

(2) Assistant

Assistant refers to the students who provide support, assistance, encouragement, or acquiescence to the bully. They may not directly participate in bullying, but they play a role in fueling the bullying behavior behind the scenes.

(3) Victim

Victim refers to the students who are bullied or attacked, and they may suffer from physical, verbal or digital violence, experiencing sustained harm and oppression.

Victims are often physically weaker and lower in status, exhibiting characteristics such as introversion, loneliness, social deficits, vulnerability to harm and fright, lack of self-confidence and self-esteem, frequently attempting to escape bullying, and feeling helpless and powerless.

(4) Disengaged onlooker

Disengaged onlooker refers to students who are not involved in bullying incidents. They may not be aware of the severity of the event, or they may feel they have no ability or responsibility to intervene. Their proportion in the bullying behavior is much larger than that of the active aggressors and victims, and their attitudes and reactions can greatly affect the occurrence of bullying.

(5) Active onlooker

Active onlooker refers to the person who witnesses bullying incidents and takes proactive actions to intervene, prevent or report the bullying to relevant authorities. Active onlookers usually consist of teachers, parents, and a small group of students. They can effectively reduce the duration and frequency of bullying behavior and play a critical role in the prevention of bullying.

3. Intervention for School Bullying

3.1 Interventions for Bullies

In school bullying, people often focus more on the victims and hate the bullies, believing that bullies have a dominant position while victims have a weaker position. However, both bullies and victims are actually in a weak position, and therefore intervention on the bullies is equally important. Bullies are the initiators of bullying behavior, so direct intervention on bullies is the most effective way to address school bullying. In recent years, schools have continuously strengthened their prevention programs against school bullying, targeting primarily the active bullies who generally lack empathy and moral responsibility. Therefore, schools should focus on moral education and social skills training that cater to their characteristics, such as offering lectures covering topics such as what school bullying is, the impact of school bullying on victims, and how to avoid school bullying. Schools should also provide timely and professional psychological counseling to the bullies, helping them better understand their emotional needs and use other means besides bullying to deal with their emotions. Secondly, schools can also adopt punishment measures such as suspension, fines, and disciplinary actions on the active bullies, letting them realize that bullying behavior is unacceptable.

3.2 Interventions for Victim

In school bullying, people often pay more attention to the victims and hate the bullies, believing that the bullies are in a position of power and the victims are in a position of weakness. However, both the bullies and the victims are in a position of weakness, and therefore, intervention with the bullies is also particularly important. The bullies are the initiators of bullying behavior, and direct intervention with them is the most effective way to address school bullying. In recent years, schools have continuously strengthened prevention programs for school bullying, primarily targeting the proactive bullies who generally lack empathy and a sense of moral responsibility. Schools need to focus on their characteristics and strengthen moral education and social skills training in their programs, such as lectures covering what school bullying is, the impact of school bullying on victims, and how to avoid school bullying. Schools also need to provide timely psychological counseling to bullies, allowing them to better understand their emotional needs and use other means besides bullying to cope with their emotions.

Victims are often the most affected by bullying behavior, and these behaviors can have a lasting impact on their future lives. Therefore, intervention with victims requires long-term attention and support, allowing them to gradually regain their confidence and self-esteem. Schools play a crucial role in intervening with victims. Firstly, schools can provide victims with timely psychological counseling services to reduce their psychological burden and make them feel that they are being cared for. Secondly, schools should offer courses on how to deal with bullying behavior and how to protect themselves when being bullied, helping victims learn how to cope with school bullying. Finally, schools should encourage victims to seek help from teachers, family members, and classmates, and let them know that seeking help will not lead to retaliation from the bullies.

3.3 Interventions for bystanders

In recent years, research on intervening in school bullying from the perspective of bystanders has gradually gained attention from scholars. Bystanders are individuals who witness bullying but do not participate in it, and their group is much larger and more likely to successfully intervene in bullying behavior. Research has found that if bystanders speak up for the victim, it can effectively reduce 50% of bullying incidents (Smith & Brain, 2006). Currently, the mainstream intervention approach is the "STAC" program developed by Midgett (2015) and other scholars. This program aims to train bystanders to become protectors of the victim through four projects: "Stealing the show", "Turning it over", "Accompany others", and "Coaching compassion". Through group discussions, role-playing, speeches, games, and other activities conducted through the "STAC" program, bystanders can become aware of the roles they play and the responsibilities they bear in school bullying incidents, and can effectively stop bullying behavior from happening. The "STAC" program can also teach bystanders specific intervention skills and strategies, encourage them to take positive intervention actions in safe situations, and report bullying behavior to relevant management personnel such as teachers and schools at the first time, in order to help the victim receive timely support and assistance.

4. Conclusion

Research on school bullying and intervention in China is still relatively behind, and serious incidents of school bullying frequently occur. This article provides a brief overview of the definition and types of school bullying, elaborates on the negative effects of school bullying on victims, analyzes the behavior and psychological characteristics of different roles in school bullying, and summarizes relevant intervention methods based on these role characteristics. The aim is to better address the longstanding issue of school bullying.

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Exploring the Reform and Innovation of Party Building Work in Universities

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Abstract: The development of the times and the progress of society have put forward new requirements for the conduct of party building work. Only by adhering to innovative ideas, continuously adjusting and scientifically planning the mode of party building work, can a new and systematic guidance system for party building be constructed, so that the conduct of party building work in universities presents a new development state and mode. Based on the influence of the information technology environment and the guidance of the spirit of the 20th National Congress, this article explores and analyzes the innovative reform of party building work in universities in the new era. From different perspectives such as introducing advanced technology and innovative party building work concepts, it systematically explores the innovative planning measures for party building work, striving to build a new organizational system for party building in universities, and scientifically optimize the value and effectiveness of party building work in universities.

Keywords: Higher Education; Party Building Work; Innovation

Introduction

The construction of grassroots party organizations in universities is related to the implementation of party education policies in the university education system, as well as the combat effectiveness and cohesion of all party members in universities. The development of party building work in universities is an important guarantee for the systematic implementation of the fundamental task of cultivating morality and cultivating people. Under the guidance of the spirit of the 20th National Congress of the Communist Party of China in the new era, party organizations at all levels in universities should actively fulfill the various work responsibilities assigned by the Party Constitution, practice the Party's policies and central decisions in education, scientific research, and other work in universities, and enhance the cohesion of the young people in universities. Therefore, in the new era of party building work in universities, it is necessary to use the guidance of the spirit of the 20th National Congress to re-examine the shortcomings and shortcomings of party building work, and actively explore the innovative development of party building work, ensuring strong spiritual support and organizational guidance for the development of university education work, and laying the foundation for the high-quality development of university education work in the new era.

1. The requirements for the reform and innovation of party building work in universities in the new era

The background of the new era requires that the party building work in universities must be innovative. In the face of new situations, new tasks, and new requirements, university party organizations need to have ideological awareness, action ability, and innovative practical ability to contribute to the comprehensive and in-depth promotion of party building work in the new era. The following are the new requirements put forward by the new era background for the innovation of party building work in universities:

Firstly, establish a modern party organization with the focus on "three comprehensive education". Party organizations in universities should focus on the "three aspects of education", innovate and explore the organic integration of party building work with education, teaching, scientific research, and social services in various fields, improve the guidance system for party building, and improve the ideological and political quality and professional level of all party members in the school. At the same time, guided by the

concept of "three comprehensive education", university party organizations should actively explore new models and mechanisms, establish modern party organizations, promote informatization, networking, and intelligence, carry forward excellent traditions, carry out diverse academic, cultural, scientific, sports and other activities, and continuously improve the cultural level and comprehensive quality of party members and faculty.

Secondly, to play a leading role in party building and promote the combination of party building and talent cultivation. University party organizations should further strengthen ideological and political work, play a leading role in party building, reshape the evaluation system, strengthen moral education for teachers and students, and enhance team cohesion and centripetal force. On this basis, university organizations should pay attention to cultivating and selecting outstanding party members and backbone faculty, actively promote the combination of party building and talent cultivation, connect the "bloodline", make good use of "talents", play a "leading" role, and promote the steady improvement of talent cultivation quality.

Thirdly, build a smart party building model and promote integrated innovation both online and offline. In the context of the information age, the application of information technology in party building work in universities is becoming increasingly widespread, requiring universities to actively explore the construction of smart party building service models. That is, party organizations in universities should deeply integrate information, technology, and intelligence, and use new technologies, new media, big data, and other means to explore the establishment of a highly intelligent party building management system. In other words, university party organizations need to adapt to the rapid development of the information age, utilize new technologies to establish a digital and intelligent party building management platform, achieve online work, information sharing and collaboration, and improve the efficiency and accuracy of party building work. At the same time, university party organizations should actively promote online and offline integration innovation, expand party building communication platforms through digitization, knowledge-based, and visualized methods, enhance the sense of participation and acquisition of party members, and enhance the vitality and innovation of party building work in the new era.

In view of this, in the context of the new era, the party building work in universities must closely revolve around new requirements, actively innovate and explore new models and mechanisms, strengthen the practical work of serving party members and faculty, comprehensively implement the new requirements of party building, and promote the high-quality, high-level, and efficient development of party building work in universities.

2. Innovative Measures for the Reform of Party Building Work in Universities under the Background of the New Era

2.1 Based on the new requirements of the new era for party building work in universities

Universities should actively explore reform and innovation measures from multiple perspectives in the process of promoting party building work, strive to build a relatively complete party building work system, and comprehensively promote the stable development and scientific advancement of university education. Below is a systematic analysis of the innovative development of party building work in universities:

The report of the 20th National Congress of the Communist Party of China clearly states that in the work of party building in universities, party organizations at all levels should actively fulfill their various responsibilities and promote the systematic implementation of party policies and lines.

Firstly, it is necessary to unify the ideology and actions of party building work in universities with the Party's innovative theory.

Secondly, actively study the innovative ideas and theories of the Party, and on the basis of emphasizing the transmission of the Party's policies, arm the mind with the Party's advanced ideas and theories. And in the work of party building in universities, it is necessary to promote the systematic implementation of the learning system of the two-level party committee central group at the school and college levels, adhere to the unwavering development concept of the party committee's "first issue" and other systems, explore the construction of the "ideological and political first lesson" theoretical learning brand, and ensure the full play of the effectiveness of the "Cadre Lecture Hall" learning mode, so as to ensure the stable development of party organization construction in

universities and the scientific implementation of party member and cadre rotation training work, In educational practice, effective education and training are implemented for active party members and development targets in universities, effectively improving the scope and breadth of theoretical dissemination.

Finally, comprehensively apply the advanced ideology and theory of the Party to guide the development of grassroots party building work in universities. In the practice of grassroots party building work in universities, the implementation of various construction work should not only play the guiding role of advanced theories, but also pay attention to organic integration with local practical work, and localize the interpretation of the party's innovative ideas and theories, so that the guiding ideology of party building work can truly play its value and role. To present new development trends and models in party building work.

2.2 Adhere to institutional innovation and gradually leverage the political core role of the Party Committee's organizational departments

In the innovative reform practice of party building work in universities, the innovation of management system plays an extremely important role in party building innovation. Only by combining the practical needs of party building innovation development and continuously exploring the innovation and optimization of management system, can universities present new development trends and achieve good development results in the innovative reform of party building work. Therefore, universities should actively implement the specific work requirements of the "Implementation Opinions on Strengthening the Party Building Work in Private Universities", and combine the actual situation of the school to explore the construction and optimization of the "two-way entry and cross appointment" management mechanism between the Party Committee, the Board of Directors, and the school administration in grassroots party building work, ensuring that it can provide good support for the innovative development of party building work. On this basis, it is necessary to actively build a consultation and communication mechanism for major issues of the Party Committee and the board of directors of universities, systematically develop and improve the system of the Party Committee and the administrative Party government joint meeting of universities, ensure that the Party Committee organizational departments can actively participate in the decision-making and supervision of major issues in universities, and lead the decision-making and execution of various major issues in universities through Party building, ensuring the efficient implementation of Party building work. In this process, through the construction and improvement of the management system, it is necessary to optimize the party building system, promote the optimization of the party and government cadre training system, the party's organizational life system, and the democratic system, promote the implementation of the ideological work responsibility system, and ensure that the main position and discourse power in the ideological field can be firmly grasped in the party building work of universities, and the construction effect can be systematically improved, To truly solve the difficulties encountered in the process of university construction and lead the high-quality development of university education.

2.3 Adhere to technological innovation and build a comprehensive management service system for smart party building in universities

In the process of reforming and innovating the grassroots party building work in universities, the development and application of advanced technology is a key task in party building work. In order to comprehensively innovate the party building work system in the new era, universities should explore the application of advanced technology, build a new smart party building work system, and optimize the effectiveness of party building in the actual process of carrying out party building work.

Firstly, universities should build smart party building platforms. University party committees should actively leverage the achievements of modern information technology to build a smart party building platform, create an information-based, digital, and intelligent party building work management platform, organically combine party organization management, party member education, ideological guidance, and organizational coordination, and achieve information sharing and resource integration.

Secondly, universities should promote the management of smart party members. By utilizing the information management platform for party members, the management and use of information technology data for university party members can be achieved from aspects such as party member file information, performance assessment, and work performance. Through data analysis, the quantification, scientific, and accurate grasp and management of party member management work can be achieved.

Once again, universities should leverage the role of smart phone apps. Creating a smartphone app for college students and party members, combining practical work with the convenience and interactivity of the internet, will effectively promote the comprehensive intelligence of party building work. Through the APP, various functions such as party affairs disclosure, information release, online learning, and communication interaction can be improved, stimulating the enthusiasm and participation of party members, and achieving a comprehensive upgrade of party building work in universities.

Finally, universities should carry out publicity and learn about smart party building work. Make full use of various promotional channels to enable Party members to understand the significance and value of smart party building work, strengthen the promotion and promotion of smart party building work, and promote the comprehensive implementation of smart party building. And utilize online learning and training to provide knowledge and skills training on smart party building work for party members and cadres, improving their theoretical and practical abilities in smart party building.

Conclusion

In summary, in the work of party building in universities, we actively implement the guidance of the spirit of the 20th National Congress, continuously innovate the ideas, concepts, and technical methods of party building work, and build a new party building work platform and work mode. This can gradually optimize the effectiveness of grassroots party building work in universities, and also better leverage the value and function of grassroots party building work in universities, leading the scientific development and comprehensive innovation of university education work with party building. Therefore, in the new era of party building work in universities, it is necessary to re-examine the development needs of the times, actively explore a relatively scientific party building work system and work guidance mode, and provide good party building guidance support for the innovative development of university education.

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The Exploration of Translating Terms with Chinese Characteristics — A Case Study of Report on the Work of the Government 2020

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Abstract: China's annual government work report (GWR) contains terms with Chinese characteristics (TCC), reflecting unique policy frameworks. Translating these terms into English poses significant challenges due to cultural disparities between China and the West. This paper examines the English translation methods used for such terms, using the 2020 GWR as a case study, aiming to provide valuable insights for future translation practices.

Keywords: Terms with Chinese Characteristics; Government Work Report; Translation Methods

1. Introduction

The government work report (GWR) is an annual document encompassing the work plans, goals, and future projections of China's government. It serves as a crucial document for promoting understanding of China's national conditions worldwide. Additionally, the report contains numerous terms with Chinese characteristics (TCC), representing the country's unique policy frameworks and drawing attention globally. Therefore, translating these terms becomes essential for effectively narrating "China's story".

This paper conducts a case study using the 2020 GWR and its English translation to explore translation methods for TCC. It offers examples to illustrate the importance of employing appropriate translation strategies in specific contexts. By delving into these translation methods, this study aims to provide valuable insights and serve as a reference for future translation endeavors.

2. The Definition of Terms with Chinese characteristics

The TCC are ideological and cultural products stemming from the modern development of China and the cultural exchanges between China and the West during modern times. They have gradually evolved through the sinicization of Marxism and have continued to evolve alongside the development of Chinese society.^[1] As the name suggests, these terms originate in China and are influenced by the nation's unique customs, culture, politics, social environment, and other factors. In general, these terms are intertwined with three key aspects: culture, politics, and the contemporary era.^[2]

3. A Brief Introduction of Government Work Report of 2020

The GWR summarizes the government's previous year's work and outlines the plans for the current year's initiatives and internal governance.^[3] The 2020 GWR addresses the unique context of the ongoing pandemic and emphasizes the importance of minimizing losses while achieving development goals. It highlights the government's key focus areas for the year, particularly in epidemic prevention and control.

4. Theoretical Supports

The Skopos Theory, proposed by Hans Vermeer, is a core translation theory in German functionalism, based on the idea that "translation is a form of human behavior" and "every behavior has a purpose". It emphasizes that the translation method is influenced by the intended purpose of the target text, guided by the principles of purpose, fidelity, and coherence. The English translation of government reports aims to communicate China's distinctive culture, society, and politics globally. Fidelity demands strict loyalty to

the translation, given the reports' significance in representing China's achievements and image. Coherence ensures concise and clear content that aligns with public thinking for reader acceptance.

On the other hand, Functional Equivalence Theory, proposed by Nida, focuses on achieving functional equivalence between two languages rather than rigid word-to-word correspondence. It emphasizes the function of the source text in the source culture and the function of the target text in the target culture, with priority given to preserving the intended meaning when conflicts arise.

5. Methods Applied in the Translating Government Work Report of 2020

After conducting a thorough analysis of the translation of specific TCC in the 2020 GWR, the author identified several primary translation methods that were predominantly employed, as follows:

5.1 Amplification

Amplification in translation involves adding necessary words, phrases, or sentences to ensure the target text's completeness and alignment with the audience's thinking and cultural background.^[8]

Example 1:

(1) ST: 支持电商、快递进农村, 拓展农村消费。

TT: We will support the roll-out of e-commerce and express delivery services in rural areas to expand rural consumption.

(2) ST: 去年以来经济社会发展和今年疫情防控取得的成绩, 是以习近平同志为核心的党中央坚强领导的结果。

TT: We owe what we have achieved in economic and social development since last year and in covid-19 control this year to the strong leadership of the Party Central Committee with Comrade Xi Jinping at its core.

In the two examples above, the Chinese original sentences lack a subject. To achieve sentence completeness in English and align with its characteristics, the personal pronoun "we" can be added as the subject, identifying the Chinese Government.

Example 2:

(1) ST: 但, 生命至上。

TT: However, life is invaluable.

(2) ST: 过去一年, 很不容易, 很不平凡。

TT: Last year was a difficult and unusual period.

In the example above, the original text lacks predicates. In the translation, it is necessary to add the implied predicates completely to conform to the English expression conventions.

Example 3:

(1) ST: 三大攻坚战

TT: the three critical battles against potential risk, poverty, and pollution

(2) ST: 深化放管服改革

TT: We will press ahead with reforms to streamline administration and delegate power, improve regulation, and upgrade service.

In the context of GWR, it is common to encounter specialized and concise terms. When translating such terms, employing an approach that includes adding translation becomes of paramount importance to precisely elucidate their specific meanings, thereby ensuring the comprehensive comprehension of these terms by foreign readers.

5.2 Omission

Omission, in adherence to the coherence principle of Skopos theory, excludes words incongruent with the target language's thinking logic and expression norms, preventing verbosity in translation.

Example 4:

ST: 严禁新建楼堂馆所, 严禁铺张浪费。

TT: Construction of new government buildings and wasteful and excessive spending will be strictly prohibited.

In the example provided, the word "严禁" appears twice. In Chinese, this expression emphasizes the tone, but in English, achieving conciseness and fluency is possible by using "strictly prohibited" only once.

Example 5:

ST: 严惩非法捕杀和交易野生动物的行为。

TT: Illegal hunting and trading of wild animals will be severely punished.

In the example above, the word “行为” is a category word commonly used in Chinese. However, in the translation, it can be omitted to avoid making the sentence cumbersome.

5.3 Combination and Division

Combination is a translation method well-suited for Chinese-English translation. It involves translating two or more short Chinese sentences into a single English sentence or a compound sentence.

Example 6:

(1) ST: 不误农时抓春耕。不懈推进脱贫攻坚。

TT: We kept up with the spring farming schedule, and continued the critical battle against poverty.

(2) ST: 加强国家安全能力建设。依法打击各类犯罪，建设更高水平的平安中国。

TT: We will strengthen national security capacity building, punish crimes in accordance with law, and more effectively carry out the Peaceful China initiative.

Chinese and English exhibit significant differences in language structure. English often uses connectives, creating strong logical relationships between sentences. Conversely, Chinese relies on short sentences with few connectives. To accommodate English readers' habits, translators can use the combination method when translating from Chinese to English;

Division is a method used in English translation to break down the original sentence into two or more sentences. This means translating a word, phrase, or clause from the original text into a clause or sometimes even an independent sentence.

Example 7:

ST: 今年财政赤字率拟按 3.6%以上安排，财政赤字规模比去年增加 1 万亿元，同时发行 1 万亿抗疫特别国债。

TT: The deficit-to-GDP ratio this year is projected at more than 3.6 percent, with a deficit increase of one trillion yuan over last year. On top of this, one trillion yuan of government bonds for COVID-19 control will also be issued.

Splitting a sentence at may harm the style or intended meaning of the original text. However, it is not always unacceptable. Occasionally, to convey the original meaning faithfully and smoothly, splitting a sentence can enhance the fluidity of the translation.

5.4 Other Translation methods

In addition to the mentioned translation methods, conversion, inversion, negation, and voice changes are also utilized in translating the 2020 GWR.

Firstly, due to the lack of corresponding language between English and Chinese, direct translation may not be appropriate. Therefore, when using the conversion translation method, translators should pay attention to the context and the overall meaning to ensure the accuracy and fluency of the translation.

Example 8:

ST: 坚持政治建军、改革强军、依法治军。

TT: We will continue to enhance the political loyalty of the armed forces, strengthen them through reform and run the military in accordance with law.

This sentence uses conversion to transform the noun in the original text into a phrasal verb during translation;

Secondly, due to the word order difference between Chinese and English, translators must adjust the word order and local structure in translation based on the purpose and customary usage. However, the translated sentence should not deviate from the original sentence's main focus.

Example 9:

ST: 中国特色大国外交成果丰硕。

TT: We achieved fruitful outcomes in pursuing China's major country diplomacy.

Chinese tends to place emphasis at the end of a sentence, whereas English often emphasizes the beginning. Therefore, adjustments to the sentence structure are necessary during translation;

Thirdly, negation as a translation method involves changing affirmative or negative expressions in the original text to their opposite form in the translation. This adjustment aligns with language habits and better conveys the original text's meaning.

Example 10:

ST: 政府工作存在不足。

TT: There is still room for improvement in the work of government.

Using the negation translation method, “不足” in the source text is rendered as “room for improvement” in the target text, providing a more accurate representation of the original meaning;

Finally, Chinese uses active voice, while English often prefers passive voice. Translators should adjust the voice to suit foreign readers' preferences.

Example 11:

ST: 强化保险保障功能。

TT: The role of insurance in protecting against risks will be strengthened.

Translating the text from active to passive voice better suits the reading habits of English readers.

6. Conclusion

Terminologies with distinct Chinese characteristics represent China's culture and people's accomplishments. Translating them into English is vital for promoting Chinese culture globally and enhancing international communication. This study explores the translation of TCC in GWR, using Skopos Theory and Functional Equivalence Theory perspectives. Various methods, like amplification, omission, combination, and division, have proven beneficial in the translation process. However, translators must carefully select appropriate methods based on specific contexts. Further research is required to continually enhance the translation quality of TCC.

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Bachelor of Medicine Degree of International Students from the "the Belt and Road" Countries--Analysis of Strategies for Improving Education Quality

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Abstract: Based on our 11 years of medical bachelor's degree education practice for international students in China, combined with the national "the Belt and Road" strategic background and the "Quality Standards of Higher Education for International Students in China (Trial)" issued by the Ministry of Education, this paper explores the strategies to improve the quality of medical education in China. Specifically, it includes: 1) optimizing the enrollment standards of students from countries along the "the Belt and Road"; 2) Improve the quality assurance system for medical bachelor's degree education in China; 3) Innovate the management concept of "convergence"; 4) Establish a comprehensive education system for the cultivation of international students in China; 5) Strengthen the process monitoring role of awarding standards for medical bachelor's degrees in China. To provide theoretical support and reference for our school and sister universities to improve the quality of medical bachelor's degree education in China.

Keywords: "The Belt and Road"; International Students Studying in China; Education Quality

Introduction

According to statistics from the Ministry of Education, in 2018, a total of 492185 foreign students from 196 countries and regions studied in 1004 higher education institutions in 31 provinces (districts, cities) across the country. ^[1] Among them, the number of international students coming to China along the "the Belt and Road" totaled 260600, accounting for 52.95% of the total number. The number of medical international students coming to China continues to grow, ranking second among all disciplines, only second to liberal arts majors, which poses a huge challenge for medical education in higher education institutions in China.

The current internationalization development of higher education in China is facing the problem of a disconnect between the scale and quality of international student enrollment, which may lead to various problems such as a decrease in the quality of student sources, a decrease in academic achievement expectations, and an imbalance in the quality of international students from different countries. ^[2] Our school has started to recruit and train medical undergraduate students since 2009. The main source of students is self funded students from countries along the "the Belt and Road". After more than ten years of struggling in the education of studying abroad in China, we have experienced the initial stage of quantity oriented education and are now in the transition period of seeking to improve quality education. Improving the quality of education is the lifeline for ensuring the long-term development of education for international students in China. Exploring ways to improve the quality of medical bachelor's degree education for international students in China is an urgent task for our school and related sister universities.

1. Improve the quality of students from countries along the "the Belt and Road" and optimize enrollment standards

Compared with the western developed countries, the medical education cycle is long and the price is high. China's medical education resources are the ideal choice for countries along the "the Belt and Road". ^[3] At the same time, it is undeniable that international students studying in China can bring significant short-term benefits and significant improvement in internationalization

indicators to universities. This has led some universities to rush towards it and blindly pursue quantity, gradually reducing the recruitment requirements for international students studying in China, and even having no requirements for applicants' past grades and other qualifications. At present, some universities have inconsistent enrollment standards, lack of systems, and low thresholds for medical bachelor's degrees for international students coming to China, resulting in uneven quality of students. This inevitably leads to a difficult process of education and uneven quality of medical bachelor's degrees for international students coming to China. As a result, in the final stage of talent cultivation, when awarding their degrees, they have to compromise and compromise, infinitely reducing graduation requirements. This has led to the non-existent standards for degree awarding, seriously affecting the quality of medical education in China and damaging the international reputation of medical education in China.

Therefore, if Chinese international students want to pursue a high-quality development path in medical bachelor's degree education, they need to objectively analyze the successful practices of traditional study destination countries, learn their enrollment methods and screening mechanisms.^[4] At the same time, through a rational analysis of the current situation of the academic background, academic level, language ability, identity qualification, economic ability and other current situations of the foreign students from the source countries of the "the Belt and Road Initiative" in recent years, as well as the impact of university admissions officers, foreign students, lecturers, administrators and medical organizations of major source countries on the quality of education and teaching of the access standards for foreign students to study medical bachelor's degrees in China, Reasonable regulations should be made for the minimum educational requirements, language proficiency requirements, proof of family economic ability, and entrance examination assessment of applicants for undergraduate medical majors studying abroad in China, in order to establish admission and admission thresholds, optimize admission standards, and focus on quality from the source of talent cultivation.

2. Strengthen the quality of medical bachelor's education in China and improve the teaching quality assurance system

The international students admitted by various universities in China are mainly divided into two categories: government scholarship students and self funded students. As a private university, our school mainly receives self funded students, and most of them come from countries along the "the Belt and Road". The quality of students is generally inferior to that of government scholarship students from other universities. How to improve the teaching quality assurance system from the system, personnel, materials and other aspects in this situation, and ensure the quality of medical bachelor's degree education for international students in China is a problem that many universities need to solve together in the process of cultivating international students.

In order to achieve comprehensive, coordinated and sustainable development of education for international students studying in China, the Ministry of Education has proposed a 16 character policy of "expanding scale, improving levels, ensuring quality, and standardizing management", with the core of "ensuring quality". Universities should make great efforts in innovating the cultivation mode of medical bachelor's degrees for international students studying in China, building a teaching staff, and developing teaching resources. At the same time, routine self-evaluation departments and mechanisms should be established to fully leverage the role of medical committees and international students in the quality control process, and improve the education quality assurance system.

3. Drawing on international management experience and innovating the "assimilation" education management model

At present, most of the management models for international students coming to China in major universities in China still adopt an independent management model, that is, to establish specialized teaching and administrative departments for international students for independent management. This management model is beneficial for the centralized management of international students, but it makes it difficult for the teaching and management departments of international students to coordinate in their daily work, reduce work efficiency, and make it difficult to share various educational and teaching information with other departments, making it difficult to carry out educational and teaching work. For this reason, some universities are also exploring assimilation management, transitioning from independent management mode to assimilation management mode. However, the establishment of the traditional "assimilation" education management model requires higher language and cross-cultural communication abilities of university teachers and administrative personnel, as well as higher requirements for the school's own hardware, software, and other aspects. This is not

feasible for ordinary undergraduate colleges, especially private colleges.

Therefore, it is necessary to learn from the management experience of major countries studying abroad and explore a "assimilation" management model for international students with Chinese characteristics. The "convergence" is not limited to the consistency of management forms with Chinese students. Blindly merging all management departments of international students and Chinese students, and unifying management methods, it should be more about the "convergence" of management concepts and standards. On the premise of continuously improving the quality of international student education, in various management work on campus, management personnel should gradually unify management concepts with the concept of managing Chinese students, Improve one's cross-cultural communication skills; Based on the school's own situation, gradually align with the management requirements and standards of Chinese students in daily teaching, attendance and performance evaluation, teaching evaluation, and student status management; In the process of international student education and management, we still need to maintain an open attitude towards the differences in religious beliefs, customs, cultural backgrounds, and other aspects of international students coming to China, and "seek common ground while reserving differences".

As an important component of China's education industry, studying abroad in China has made positive contributions in strengthening the internationalization process of education, enhancing friendship between Chinese and foreign people, and cultivating international talents who are knowledgeable, friendly, and pro China. The quality of education always depends on the quality of the target audience. The level of education and the effectiveness of education for international students studying in China still require in-depth research, which is a challenge and an opportunity for higher education in China.

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Application of Mind Map in English Teaching for Countryside Primary School Students

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Abstract: Mind map was a note-taking method proposed by Tony Buzan(1994). And later it is developed into eight modes of thinking maps by David Hyerle(2009), which has been widely used in English teaching. As a knowledge visualization learning tool, mind map could help students construct knowledge framework, sort out knowledge structure, expand thinking and enhance memory. This article will take the grade three class of Shijiao Qixing Primary School in Shijiao Country, Qingyuan City as a sample. The Shijiao Qixing Primary School is a village primary school which most of the students are left-behind children and there are about 30 teachers with an age of 40. Neither the teachers nor the students have experienced the mind mapping teaching method. The article will explore the application of mind mapping in a countryside primary school based on relevant theoretical knowledge and classroom practice.

Keywords: Mind Map; Countryside Primary School; English Teaching

1. Introduction of Mind map

1.1 The definition of Mind map

Mind Map is based on early research showing left-brain and right-brain dominance for linear and holistic operations, respectively (David Hyerle, 2011:94). Tony Buzan (1994:59) stated that mind map is the external expression of Radiant Thinking. It is a method of storing, organizing and prioritizing information (usually on paper) by using key words and key images, each of which will trigger specific memories and encourage new thoughts and ideas (Tony Buzan, 2006:8).

1.2 Eight types of thinking maps

The thinking map contains eight basic types: circle map, bubble map, double bubble map, tree map, flow map, bridge map, brace map and multi-flow map (David Hyerle, 2009: 178). And every type has its own function. The first one is the circle map. This map helps the students to generate relevant information about topic which is represented in the center of the circle. This kind of map is usually used for brainstorming and deepening the content. The second one is the bubble map. The bubble map is used for describing things using adjectives. It helps the students to develop their ability to identify qualities and use descriptive words. The third one is the double bubble map. This map is designed to compare as well as contrast two different things. Students can use this kind of map when they want to examine similar and different qualities. The fourth one is the tree map. This kind of map helps the students to do both inductive and deductive classification. It can be used to classify things and ideas. Students will learn to create general concept or main ideas at the top of the tree and the specific details of supporting ideas in the branches below. The fifth one is the brace map. This kind is designed to analyze the physical objects. It is used to show the component parts of a physical whole. This map encourages the students understanding on how to determine physical boundaries. The sixth one is the flow map. This type of map is used to show order, sequences, cycles, timeline, actions, steps, stages, and directions. The seventh one is the multi-flow map. This kind of map is used to show the relationship between the causes and the effects. The center on the table is an important event. On the left side of the event is the causes, while on the right side is the effects. The eighth one is the bridge map. This kind of map is used for creating and interpreting analogies.

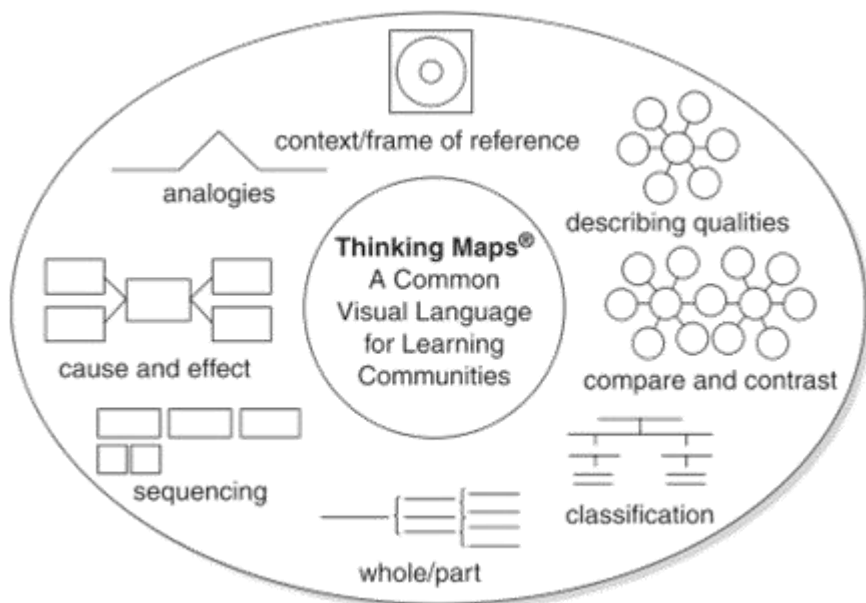


Figure 1.2, Overview of Thinking Map

(Taken from David Hyerle, 2009:165)

2. Application of mind map in countryside primary school

This study has taken the grade three students of Shijiao Qixing Primary School in Shijiao Country, Qingyuan City as an example. The primary school, located in a rural area, has 40 students in Grade 4. Almost all of them are left-behind children who do not have learned anything about the mind map. This lesson is about the grade three students in the countryside primary school's English lesson *Unit 3 Look at me*, which takes body parts as the theme.

In the part of leading in, after the daily greetings, students are required to do some actions while playing the video *Head shoulders knees and toes*. And then the teacher helps students perceive the new words which they are going to learn by using the visual and auditory senses.

In the presentation part, teacher shows the face of Zoom on the PPT (See Figure 2.1) and guide the students to point out its features. After displaying the new words one by one with a flash card, the teacher shows all the words in the form of a bubble map (See Figure 2.2). In the classroom, by asking different questions, the teacher stimulates students' learning interest, confirms their answers, and corrects their mistakes, as well as guides the students to use the structure they have learned. At the same time, students have just started to contact with single and plural, which could be beneficial to make the expression of vocabulary and grammar more concrete.

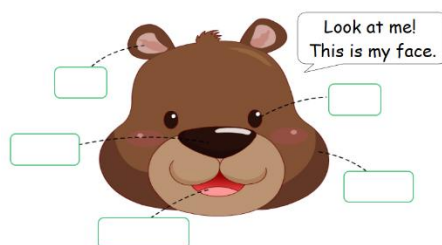


Figure 2.1

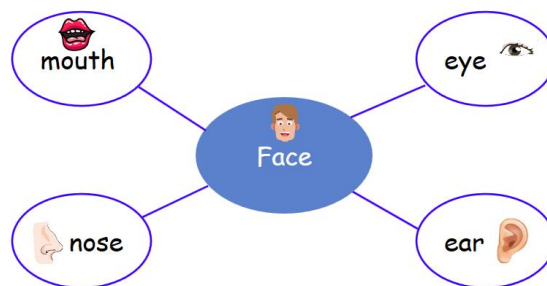


Figure 2.2

By using the form of mind map, teaching could be presented more clearly and concretely. The multi-flow map helps students clarify the source of sentence structure. Following it's a bridge map to classify and compare single and plural. These two types of thinking maps can help students form a graphic pattern and deepen their memory.

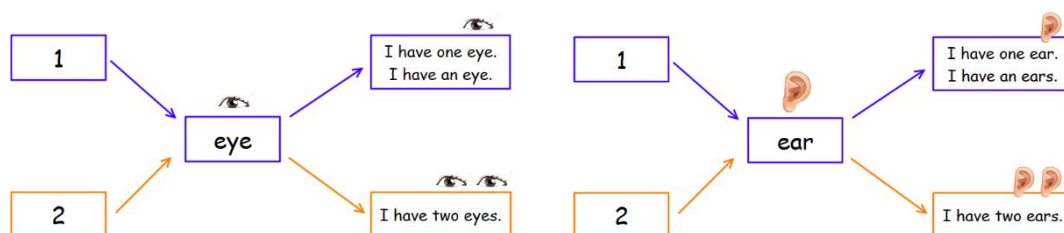


Figure 2.3 & 2.4 The Multi-Flow Map



Figure 2.5 The Bridge Map

In the practice part, the teacher shows up the bubble map (Figure 2.2), and leads the students to read the words twice, and then divides the class into four groups and play two games in a competitive format. For example, the missing game, which the teacher covers one of the words and then asks students to speak out the answer.

By playing games and combining with the structure (I have ...) learned in the previous unit, the teacher requires students to perceive the new sentences first, and then give each group a worksheet, as figure2.6 shown below. This is a flow map to guide students how to show and tell. The teacher guides the students to fill the blank above, and then leads them to read twice from the beginning to the end, after that, asking them to practice in the groups. The flow map could clearly show the sequence and direction, which divides the required content into three parts: beginning, middle and the end.



Figure 2.6

In the production part, the teacher asks each group students to show and speak out their own group worksheet content.
In the summary part, with the help of a mind map, the teacher shows the words and structure as below (Figure 2.7):

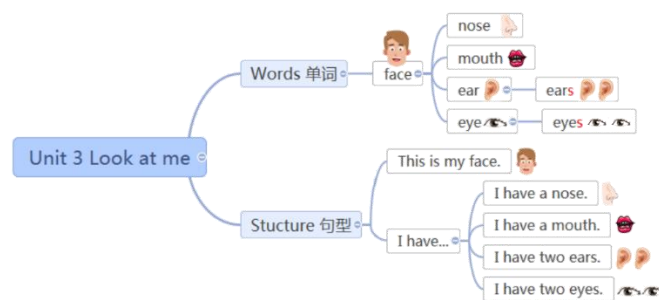


Figure 2.7

3. Advantages and disadvantages of mind map

Tony Buzan (1994:60) said: “Mind maps may be enhanced and enriched with color, pictures, and dimension to add interest, beauty and individuality. These in turn aid creativity, memory and specifically the recall of information.” There are many merits for the teacher to apply the mind map in English teaching. First, for the countryside primary school students, vivid pictures can deepen their memory and make it easier to remember knowledge points.

Secondly, through mind map, students can clarify the structure of the article and understand the text. In the process of drawing a mind map, they are also practicing their ability of analogy and summary. Finally, the radioactive structure of the mind map also allows them to expand their thinking, play and create. As Tony Buzan (1994:59) said: “The Mind Map can be applied to every aspect of life where improved learning and clearer thinking will enhance human performance.” Therefore, it's an effective English learning tool.

Although most of researchers and students agree that mind map is beneficial, students still encounter some difficulties in the process of drawing mind maps. First, drawing is somewhat difficult for them. Teachers often present mind maps in the form of PPT, but some pictures are difficult for them to imitate, which is very time-consuming. In addition, for students who are not good at drawing, the use of shapes and colors can be confusing. Drawing mind maps is to integrate art into English learning. Students who are not good at drawing need to make their drawings more concise. The teacher can print out the frame of the mind map, and give it to them to imitate, then teach them to draw non-colored stick figures, and then slowly transition to colored pictures.

The second problem is that they lack the ability to generalize knowledge and grasp the key words. The countryside primary school students' logical ability is not strong, which requires the teacher to extract the knowledge points in advance and lead the students to draw the mind map step by step.

When utilizing mind maps in English teaching, teachers should present various mind map frameworks and then teach students how to put knowledge points into the frameworks. The teacher should give more encouragement to the countryside students, as well as help them analyze, discuss and solve the problems.

4. Conclusion

Tony Buzan (1994:232) stated that Mind Map makes lessons and presentations more spontaneous, creative and enjoyable, both for the teacher and the students. With the help of mind map, English words and sentences are no longer isolated individual and mechanical memory, which could help establish connections between old and new knowledge, between categories or between superiors and subordinates. For countryside primary school English teaching, mind map is a new attempt, which makes English lessons become more vivid and interesting, and help to improve the teaching quality.

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Research on Automatic Classification Based on Academic Text Corpus

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Abstract: Recognizing the discipline category of the abstract text is of great significance for automatic text recommendation and knowledge mining. Therefore, this study obtained the abstract text of social science and natural science in the Web of Science 2010-2020, and used the machine learning model SVM and deep learning model TextCNN and SCI-BERT models constructed a discipline classification model. It was found that the SCI-BERT model had the best performance. The precision, recall, and F1 were 86.54%, 86.89%, and 86.71%, respectively, and the F1 is 6.61% and 4.05% higher than SVM and TextCNN. The construction of this model can effectively identify the discipline categories of abstracts, and provide effective support for automatic indexing of subjects.

Keywords: Deep Learning; SCI-BERT; Academic Literature; Automatic Indexing

1. Introduction

As one of the basic research tasks in knowledge mining, automatic text classification can not only effectively distinguish the categories contained in the text, but also play an important role in promoting subsequent automatic recommendation, automatic text summarization and text structure knowledge mining. The research of automatic classification on general text has achieved great success, and has the value of engineering application to a certain extent. At the same time, with the rapid development of deep learning technology, the classification effect on general text is more prominent. However, the research on domain text needs to be strengthened and deepened. On the one hand, the scale of corpus used in automatic classification of domain text is relatively small on the whole, and on the other hand, the technology used needs to be improved.

In recent years, with the convenience of obtaining corpus in the academic field, the research on the exploration of academic text corpus based on deep learning has increased more. However, by combing the relevant research, it is found that the research on automatic classification in the academic field mainly focuses on several disciplines or based on small-scale corpus. From the perspective of the whole academic inquiry, it is of special value and significance to classify and explore the whole discipline based on the large corpus. On the basis of the above, based on the corpus of Web of Science 2010-2020, this paper constructs the corresponding automatic classification model through traditional machine learning and deep learning. On the one hand, this study helps to classify a paper from the whole subject, on the other hand, it also verifies the performance of deep learning and traditional machine learning from the perspective of model.

2. Literature review

SVM is a classic classification algorithm. Since it was proposed, many scholars have carried out extensive research on SVM-based feature selection methods and application scenarios (Chandra and Bedi, 2021). Neumann et al.(2006) presented four novel continuous feature selection approaches that directly minimize classifier performance, using both linear and nonlinear Support Vector Machine classifiers. The authors' methods include additional regularization and embedded nonlinear feature selection, and they apply difference of convex functions programming to solve their optimization problems. The authors demonstrate the effectiveness of their proposed method through experiments on organ image classification. Bazi Y et al.(2008) studied how to improve the performance of SVM when it is applied to the classification task of hyperspectral imagery, and proposed a hyperspectral image classification system based on SVM. The system allows detection of optimal discriminative features and automatic estimation of optimal SVM parameters through a genetic optimization framework. Mathur et al.(2008) explores the potential of support vector machines for supervised

classification analyses in remote sensing. The results show that the one-shot multiclass classification approach is more accurate and efficient than the traditional binary SVM-based approaches. Pal et al.(2010) explored the accuracy of SVM classification and its sensitivity to the number of features used in the task of the classification of hyperspectral data. Rodrigo et al.(2013) compared the effectiveness of Support Vector Machines (SVM) and Artificial Neural Networks (ANN) in sentiment analysis. According to the experiment, the performance of SVM and ANN in sentiment analysis depends on the dataset and the level of data imbalance. In terms of classification accuracy on the benchmark dataset of Movies reviews, ANN outperformed SVM significantly, even in the context of unbalanced data. However, on datasets with more noisy terms, such as Books, GPS, and Cameras, the performance of ANN tended to decrease below the performance of SVM as the data imbalance increased. In terms of efficiency, the study found that SVM had a high computational cost at the running time, while ANN had a high computational cost at the training time. Ebrahimi et al.(2017) used support SVM method to detect thrips on the crop canopy images. In this study, the image processing technology was combined with the branch SVM method, and the target thrips could be detected accurately on the basis of selecting the appropriate area and color index, and the error was less than 2.5%.

SVM offers a principled approach to machine learning problems because of its mathematical foundation in statistical learning theory (2015). It can be seen from the above research that SVM can provide great help in both natural science and social science research. In the past few decades, various variants of SVM have emerged and have been applied to the classification tasks of text and images in different fields. Even in the era of neural network models, SVM has outstanding performance advantages in some tasks.

Liu and Guo (2019) proposed a new AC-BiLSTM model, for the high dimensionality, sparsity, and semantic complexity of data faced in text classification problems, which contains BiLSTM, attention mechanism, and the convolutional layer to capture the local features of a phrase and the global semantics. Yue and Li (2020) proposed a text classification method that incorporates Word2vec, BiLSTM, and CNN, in order to solve the problem that short text classification algorithms are prone to find errors when performing sentiment classification, and the study showed that this hybrid network model performs better than a single-structure neural network model in short texts. Deng et al. (2021) proposed ABLG-CNN model, a text classification model that fuses CNN with gating mechanism, which is based on BiLSTM and can capture semantic and local phrase features of text context. Wu et al. (2021) proposed a multi-category text classification model WTCM based on weighted Word2vec, BiLSTM and attention mechanism, which was shown to be effective in solving the problems of high latitude of text vector representations and weak ability of semantic feature information extraction in traditional multi-category text categorization algorithms. Enamoto et al. (2022) proposed a shallow network with a BiLSTM layer and an Attention layer, in order to solve the problem of BiLSTM in Portuguese legal text classification, and the study showed that combining the BiLSTM layer and the Attention layer helps to capture the contextual information in long judicial texts. Guo et al. (2022) proposed a text classification method based on BiLSTM and Attention mechanism for the problem of difficult to accurately categorize and manage Internet news, and the study showed that the method can effectively improve the classification effect of Chinese long news text. Ruan et al. (2022) proposed an ATT-CN-BiLSTM Chinese news classification model by combining CNN model and BiLSTM model, which improves the feature extraction process of CNN and BiLSTM by using attention mechanism. Xue et al. (2022) proposed an improved Mutual Graph Convolution Networks (IMGCN) model, which introduces a semantic dictionary (WordNet), contextual dependencies, BERT, and bi-directional long and short-term memory network (BiLSTM) to solve the problem of Graph Convolutional Neural Networks (GCN) cannot fully utilize context-dependent information and is not good at capturing local information in text classification. Xu et al. (2022) proposed a multi-model structure based on Bert-CNN-BiLSTM for the overfitting phenomenon of the BERT pre-training model in training a small-sample Chinese text classification dataset, which was shown to be effective in extracting the feature information in the text.

The above studies cover a variety of BiLSTM-based neural network architectures for text classification tasks. By incorporating the attention mechanism, convolutional layers, and different neural network models, such as Word2vec, BERT, CNN, etc., these methods effectively capture the local and global features of long and short texts by incorporating attention mechanisms, convolutional layers and different neural network models, such as Word2vec, BERT, CNN, etc. It performs well in solving the problems of long-term dependence, semantic complexity and high dimensionality of data, and improves the text classification effect of BiLSTM model in dealing with long text, short text, small sample and other types of data. These studies confirm that the hybrid network

structure performs better than the single network structure in text classification tasks, and provides innovative ideas and methods for solving problems in practical applications.

Sun et al. (2019) comprehensively explored the performance of BERT under different fine-tuning strategies on various classification datasets, such as sentiment classification and topic recognition. They found that further pre-training can significantly improve performance, and both single or multi-task fine-tuning has a positive impact on the classification results. Li et al. (2019) fed the original BERT embedding to CNN and Bi-LSTM to further extract local and global features, and combined them through fully connected layer. Their method surpassed the previous model in the job recruitment text classification task. Lu et al. (2020) proposed the VGCN-BERT text classification model, which combined BERT and Vocabulary Graph Convolutional Network (VGCN) to enhance the learning capability of global vocabulary information. It surpassed the performance of single model on five classification datasets, including sentiment analysis and hate detection. Maheshwari et al. (2021) classified the citation purpose and importance of academic text citation contexts based on the BERT framework. BERT and SciBERT achieved the best results respectively, and linear classifier was better than Bi-LSTM. Mondal (2021) proposed the BBAEG (Biomedical BERT-based Adversarial Example Generation) attack algorithm for biomedical text classification. This method enhanced the performance of BERT-MLM in entity and synonym replacement, and introduced multiple mechanisms for entity modification and generating high-quality adversarial samples. Pujari et al. (2021) designed a multi-label academic text classification model. They used several multi-layer perceptrons to predict the probability of each category label for metadata embedded with SciBERT, and verified the performance on BioCreative VII task. Khadhraoui et al. (2022) constructed the Cov-Dat-20 abstract dataset containing four COVID-19 related topics. They further pre-trained BERT on this dataset and got the CovBERT model specialized for COVID-19 related scientific text. Smirnova and Mayr (2023) compared the named entity recognition (NER) performance of different Flair embedding models on corpora of varying scales. They found that adding RoBERTa embedding did not improve performance, and when the corpus size increased to a certain extent, the NER performance dropped. Mou et al. (2023) proposed a unified pre-training architecture (UPPAM) for language-based political actor modeling, which introduced new mapping relations, new pre-training tasks, and multi-granularity actor representation models during pre-training. It achieved better performance in several downstream political text classification tasks. KafiKang and Hendawi (2023) combined Relation BioBERT (R-BioBERT) embedding with Bi-LSTM classifier for drug-drug interaction (DDI) extraction. Their method surpassed baseline performance on SemEval 2013, TAC 2018 and TAC 2019 datasets.

The above-mentioned studies indicate that current academic text classification tasks mainly adopt the methods based on BERT embedding. Researchers enhance BERT's classification performance on domain-specific texts by employing strategies such as continuing pre-training, modifying self-supervised learning tasks, and fine-tuning. Particularly, the incorporation of neural networks like CNN and GCN further extracts text features, enabling more effective learning of both local and global information. Additionally, besides common multi-class text classification tasks, there has been some exploration into the more complex multi-label classification.

3. Data source

The corpus of abstracts used in this study was obtained from the WOS (Web of Science) database, with abstract data selected from the years 2010-2020. Firstly, all the title information of the WOS database from 2010-2020 was obtained, after which the missing data of year, abstract, and WOS categories were filtered to obtain the preliminary literature categories and abstract data. In terms of abstract text category determination, the number of subcategories provided in the WOS database is too large, while a document may have multiple subject categories, which is not conducive to subsequent text classification studies targeting abstracts. Therefore, this study adopts the five categories set by the WOS database as the reference for abstract text categories. Specifically, according to the classification system provided by the WOS database, the category information in the title information of the WOS database is divided into five categories. In this process, for documents belonging to multiple WOS categories, after statistical investigation, multiple WOS categories belonging to the same document often belong to the same major category, so the first WOS category belonging to the document is selected as the reference for category classification. After screening and extracting the title information of WOS database from 2010 to 2020, a total of 9560290 abstracts were obtained, and the overall statistics of abstract data are shown in Table 1.

Table 1 Statistical information of WOS abstract corpus

Basic statistical information	Values
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Total file size	11.55 GB
Total number of texts	9,560,290
Total number of words	1,780,769,324
Average sentence length of abstracts	186
Maximum sentence length of abstracts	3059
Minimum sentence length of abstracts	50

Table 2 demonstrates the distribution of categories of summary data from the WOS database used in this study. It can be seen that the Life Science & Biomedicine discipline contains the largest number of sub-disciplines as well as the number of documents, while the Arts & Humanities discipline contains only 0.21% of the total number of abstracts. On the one hand, Arts & Humanities has the least number of subdisciplines in the classification system used in this paper, and on the other hand, in the process of data extraction and classification, there is a part of the WOS classification name that does not correspond to the name of the category in the classification system, which leads to the small proportion of abstracts in Arts & Humanities. At the same time, the number of abstracts of Social Sciences is much less than Physical Sciences and Technology when they have similar number of subdisciplines. WOS database, as a more comprehensive database, shows that Humanities & Social Sciences research is weaker than natural sciences.

Table 2 The distribution of WOS abstracts in accordance with discipline

Categories	Number of sub-disciplines	Total with	%
Life Sciences & Biomedicine	64	4,097,398	42.86%
Physical Sciences	16	2,804,019	29.33%
Technology	20	2,018,146	21.11%
Social Sciences	19	620,369	6.49%
Arts & Humanities	7	20,358	0.21%
Total	126	9560290	

4. Methods

4.1 Support Vector Machine (SVM)

As shown in Figure 1, the SVM model is a classification model based on statistical theory. The basic idea is to construct a hyperplane as a decision plane to maximise the distance between positive and negative modes. This model has wide applications in terms of text classification. This research applied it to the task of the identification of abstract category. Firstly, we transformed the abstract sentences into a term frequency-inverse document frequency (TF-IDF) vector. Then, by nonlinear mapping, the SVM model mapped the vectorised abstract sentences TF-IDF vector to a high-dimensional feature space, converted the nonlinear classable problem in the original sample space into a linear classable problem in this feature space, and used kernel functions to avoid the curse of dimensionality and reduce computational complexity. Applying a margin maximisation learning strategy to adjust the model parameters enables the classification of abstract category.

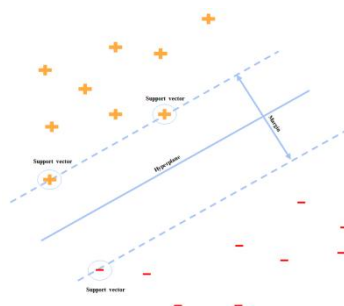


Figure 1. discipline classification model based on SVM

4.2 Text convolutional neural network (TextCNN)

As shown in Figure 2, the TextCNN model (Kim 2014) is a text classification model based on CNNs. First, through a word

embedding layer, each word of the abstract is mapped into a word embedding representation to form a word embedding matrix of abstract, and then through a convolution layer, with different filters, the abstract word embedding matrix can be scanned and calculated in the manner of a sliding window, which is similar to extracting N-gram, obtaining abstract convolutional semantic vectors. Then, through a Pooling layer, the most effective features in the abstract convolution features for abstract category classification can be extracted using Max Pooling, thereby obtaining the abstract Pooling semantic vectors. Finally, using the Softmax layer enables classifying and predicting the semantic vector features of abstract Pooling to obtain the abstract category and adjusting the TextCNN model parameters according to the prediction results.

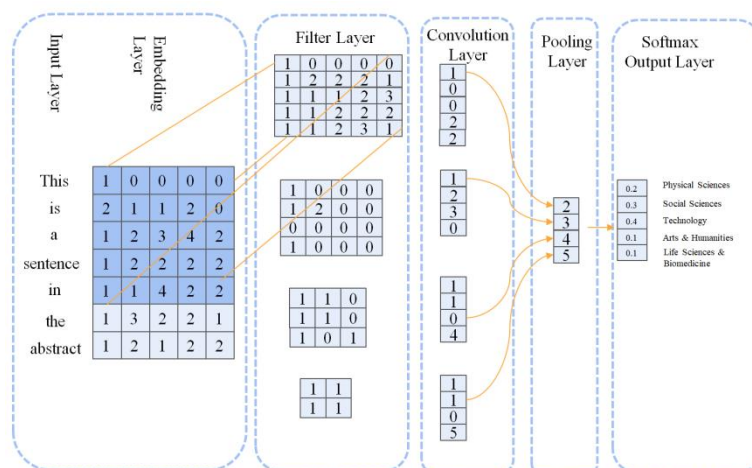


Figure 2. Discipline classification model based on TextCNN

4.3 Bidirectional Encoder Representation from Transformers (SCI-BERT)

As shown in Figure 3, BERT (Devlin et al. 2018) is a deep language representation model that is improved based on the bidirectional language model. SCI-BERT is a pre-trained model based on BERT using academic literature. It is completely based on the self-attention mechanism transformer structure to model the sentences in abstracts. The advantage of SCI-BERT compared to other neural network models is that a large-scale unsupervised corpus is adopted for pre-training. When applying the abstract category classification task, the initial parameters of the entire training process are originated from the pre-training model. First, abstract word embedding, sentence embedding, and position embedding vectors are added, and then, through self-attention multi-layers, the semantic vectors of abstract are made available, and finally through the Softmax layer, the category of abstract is classified and predicted. Model parameters can be fine-tuned according to the prediction results.

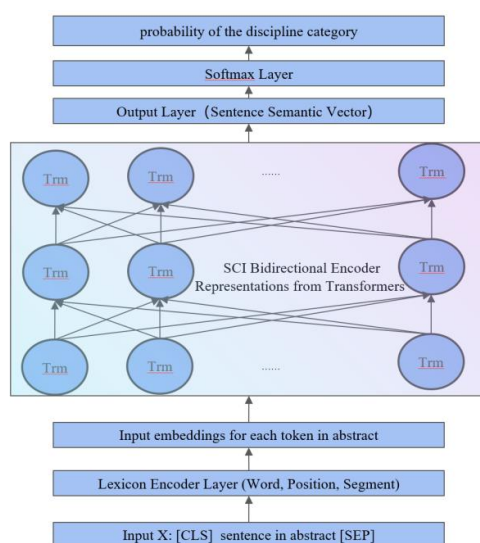


Figure 3. discipline classification model based on SCI-BERT

5. Experiment

5.1 Model parameters and experiment environments

The SVM was implemented using the sklearn library in Python, where the kernel function is Radial Basis Function (RBF); the penalty coefficient was set to $C=2.0$, $\gamma=0.5$, and text representation used TF-IDF.

TextCNN and SCI-BERT were the deep learning models for text classification. The main structure of the TextCNN model was convolution neural network, the dimension of word embedding was set to 128, the number of filters was 200, the filter size was $3*3$, $4*4$, $5*5$. To prevent the training data from overfitting, the dropout rate was set to 0.5 and the epoch was set to 20. The batch size was 512. The main structure of the SCI-BERT model was Transformer; it uses transfer learning to change the output layer of pre-trained SCI-BERT model, which is used for academic abstract subject classification task in the field of social sciences and natural sciences, where the number of hidden unit was set to 768, the number of self-attention was 12, warm-up proportion was set to 0.1, learning rate was $2.0E-5$, the batch size was 16, the maximum sequence length was 512, and the epoch was set to 3.

Since the neural network involves massive matrix calculations during the training process, in order to accelerate the training speed, this research used NVIDIA Tesla P40 GPU to train the neural network. The main parameters of the testing machine were: CPU: 48 Intel (R) Xeon (R) CPU E5-2650 v4 @ 2.20GHz; Memory: 256GB; GPU: 6 NVIDIA Tesla P40 memory: 24GB; Operating system: CentOS 3.10.0.

5.2 Experimental results

In order to test the accuracy of the model, we divided the training data in the form of 8:2, that is, 80% of the data is the training set, and 20% of the data is the test set. Due to the large amount of data, we sampled the data, each discipline according to the standard of 50,000 abstracts, if it is less than 50,000, all will be taken out, the overall abstract data is shown in Table 3

Table 3 Distribution of sampling data

Discipline	number of abstracts
Physical Sciences	50000
Social Sciences	50000
Technology	50000
Arts & Humanities	20358
Life Sciences & Biomedicine	50000

As shown in Table 4, we use the macro average method to calculate the precision, recall, and F1. Among them, SCI-BERT has the highest performance, with precision rate, recall rate, and f1 reaching 86.54%, 86.89%, and 86.71% respectively. The precision is 3.76% and 6.11% higher than SVM and TextCNN, the recall is 4.33% and 6.75% higher than SVM and TextCNN, and the f1 is 4.05% and 6.61% higher than SVM and TextCNN. The reason for this is that SCI-BERT has been pre-trained on a large-scale unsupervised paper corpus, and uses a Transformer architecture with a self-attention mechanism, which works well.

Table 4 Classification performance comparison of different models

	SVM	TextCNN	SCI-BERT
macro-avg precision	82.78%	80.43%	86.54%
macro-avg recall	82.56%	80.14%	86.89%
macro-avg f1	82.66%	80.10%	86.71%

6. Conclusion

This study first obtained the WOS 2010-2020 abstract texts of natural science and social science, and built a basic corpus with a total of 9,560,290 abstract texts. Then classify its subjects, and construct 5 categories in total, namely Physical Sciences, Social Sciences, Technology, Arts & Humanities, Life Sciences & Biomedicine. Then, the subject classification model was constructed by using the machine learning SVM model and the deep learning models TextCNN and SCI-BERT. It was found that the SCI-BERT model had the best performance, and the precision, recall, and f1 were 86.54%, 86.89%, and 86.71% respectively, the f1 is 6.61% and

4.05% higher than the TextCNN and SVM models, respectively. In the future, we will build support for extracting semantic knowledge in abstracts, and provide support for automatic indexing of academic literature knowledge.

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Research on Curriculum and Teaching Reform Based on the XINWEI Education Platform: A Case Study of Corporate Finance

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Abstract: Corporate finance courses are increasingly adopting data-driven teaching methods. Modern corporate finance courses are focusing more on students' career development. Through simulation practice and career planning guidance, students are better prepared to face challenges in the workplace after graduation. Students need to learn how to utilize data analysis tools and techniques to extract useful information from large datasets and make more accurate decisions. Data-driven teaching is a significant innovation in current curriculum reforms. In recent years, with the development of technology and the emergence of financial innovation, corporate finance courses have been undergoing continuous changes and innovations. These courses have started to emphasize emerging areas such as digital finance, blockchain technology, and sustainable development. Taking the example of corporate finance, this paper integrates the demands of skill development in the era of digital finance, focusing on aspects like teaching methods, reform methodologies, practical experiments, feedback mechanisms, and data analysis.

Keywords: Teaching Reform of Corporate Finance; XINWEI Education Platform

Introduction

Corporate finance courses have gained increasing importance in business schools, becoming essential foundational courses for students majoring in finance, accounting, and management. Current corporate finance courses are becoming more practical, emphasizing the integration of theory and real-world cases. Students analyze real financial statements and financial data to understand the logic behind business decisions and enhance problem-solving skills ^[1]. Corporate finance encompasses a wide range of disciplines, requiring students to master accounting, investment, financial valuation, corporate law, financial data analysis, and more. In the era of globalization, corporate finance courses are paying more attention to international financial markets and the operations of multinational corporations. Students need to comprehend different countries' financial systems, international investment, and exchange rate risk management ^[2].

Challenges in Teaching

Traditional corporate finance courses often involve passive learning, with teachers delivering content and students listening. Interaction between students and teachers, as well as among students themselves, is often lacking. Additionally, the lack of practical application of acquired knowledge is a concern. The teaching model typically comprises theoretical instruction and practical learning. The former focuses on explaining and learning theoretical knowledge related to corporate finance, emphasizing the interconnectedness of concepts. However, many students struggle to grasp the framework connecting these theoretical concepts, often resorting to passive learning and exam-oriented approaches. Outstanding corporate finance courses should emphasize students' comprehension of financial thinking frameworks, including elements like the financial market and tool components, valuation theories, risk management, and asset pricing ^[3].

Furthermore, the fast-paced evolution of financial products in the financial market demands that finance professionals possess continuous research skills in emerging fields and technologies. Traditional finance courses might not promptly update their materials and content, leading to a disconnect between the learned content and real-world applications. For instance, the rise of fintech might be

neglected in traditional finance courses. Moreover, changes in national policies or relevant regulations often require financial products to be redesigned to meet new market demands. Traditional finance courses often focus on imparting established theories and methods, lacking elements that cultivate students' innovation abilities. Many universities in China lack practical training and assessment of students' practical capabilities, with practical assignments carrying little weight in final grades. The evaluation mainly relies on written exams, making it difficult to assess students' practical skills ^[4].

Design of Process-Based Assessment Reform

To solve the identified challenges, innovative teaching approaches have been introduced in the corporate finance curriculum:

Case-Based Learning: Integrating real-world case studies into the curriculum allows students to bridge theoretical knowledge with practical application. These cases can cover diverse industries, providing students with a holistic understanding of how financial principles are implemented in various business contexts.

Guest Lectures: Inviting professionals from the finance industry to deliver guest lectures provides students with insights into current market trends, challenges, and real-world applications. This exposure to industry experts enhances students' understanding and enthusiasm for the subject.

Flipped Classroom Model: Shifting from traditional lecture-style teaching to a flipped classroom model encourages active student engagement. Pre-recorded lectures and online resources are made available before class, allowing in-class time to be dedicated to discussions, problem-solving, and collaborative activities.

Interactive Workshops: Conducting interactive workshops focused on data analysis tools and techniques equips students with practical skills. These workshops enable students to explore financial data sets, extract insights, and make informed decisions, fostering their analytical abilities.

Virtual Trading Simulation: Incorporating virtual trading simulations allows students to experience the dynamics of financial markets in a controlled environment. Through simulated trading, students learn to manage risks, make investment decisions, and understand market fluctuations.

Industry Projects: Integrating real projects from the finance industry provides students with hands-on experience. This approach enhances their problem-solving skills, teamwork, and practical understanding of financial concepts.

To Addressing issues above mentioned, this paper proposes the following instructional design for corporate finance courses:

1. **Textbook Selection:** The course will utilize Ross's "Corporate Finance (11th/12th Edition)" due to its abundance of calculation problems, which help students grasp theoretical knowledge. The end-of-chapter case analyses and advanced questions will enhance students' analytical and problem-solving abilities.

2. **XINWEI Education Platform:** a shared online learning space for teachers and students, will be employed to provide students with additional learning resources. The platform will host post-lecture exercises and comprehensive assignments to reinforce students' understanding.

3. **Introduction of Practical Projects:** This course will include various practical assignments, such as mid-term assignments and staged group assignments. The mid-term assignment requires students to use learned knowledge to analyze financial statement data and calculate net present value. The three-week assignment aims to enhance students' ability to collect and process financial data. The group assignment tasks groups with analyzing company data and calculating financing costs, nurturing their financial analysis abilities. The assigned teacher will provide guidance and lead discussions to foster student engagement.

4. **Final Exam Reform:** The final exam will be a closed-book assessment, aiming to cultivate students' critical financial thinking by emphasizing the weight of analytical questions.

5. **Revised Grading System:** The course's grading scheme will be adjusted to align with the new instructional elements introduced above. In addition to the redesigned grading system mentioned earlier, the course employs various assessment and feedback mechanisms to enhance student learning and performance:

(1) **Continuous Assessment:** Periodic quizzes, assignments, and discussions throughout the course ensure that students remain engaged and consistently apply their learning. These assessments contribute to the overall course grade.

(2) **Peer Review:** Incorporating peer review for assignments encourages students to critically assess their peers' work. This not

only provides diverse perspectives but also enhances students' ability to provide constructive feedback.

(3)Individualized Feedback: Detailed feedback on assignments and assessments helps students understand their strengths and areas for improvement. This feedback guides their learning trajectory and fosters a growth mindset.

(4)Self-Assessment: Encouraging students to reflect on their learning journey and self-assess their progress promotes metacognition. This practice enables students to take ownership of their learning and set goals for improvement.

Evaluation of Teaching Effectiveness

The reform in the corporate finance curriculum, based on the XINWEI Education Platform, highlights the importance of incorporating practical application, technology, and industry insights into finance education. By addressing traditional teaching challenges through innovative approaches and robust assessment strategies, this reform aims to nurture well-rounded finance professionals capable of meeting the dynamic demands of the financial landscape.

In conclusion, the ongoing evolution of corporate finance education seeks to empower students with practical skills, critical thinking abilities, and a deep understanding of real-world financial dynamics. Through the integration of data-driven teaching methods, technological platforms like XINWEI, and experiential learning opportunities, students are better prepared to navigate the complexities of the financial industry and contribute effectively to the global business landscape.

While this reform has enhanced student interest and engagement, there are challenges that need to be addressed:

Passive Learning: Some students continue to rely on passive learning, lacking independent study skills. Group assignment participation and literature reading are insufficient.

Lack of practical Skills: Certain students struggle with practical application and computer skills, hindering their ability to analyze and solve problems effectively.

Low skilled of Time Management: Some students have difficulty managing their time and completing assignments punctually.

Despite these challenges, the reform has identified areas for improvement. With ongoing innovation in teaching and curriculum development and collaboration from various university departments, students' overall abilities are expected to improve.

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Research on the Integration of Red Genes into the Daily Ideological and Political Education of College Students

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Abstract: In the great practice of long-term revolution, construction and reform, the red gene created and developed by the CPC is a noble belief and noble emotion that has been continuously precipitated and inherited in the blood and struggle of countless people throughout the country, and has been deeply rooted in the blood and soul of the people of the CPC. Against the backdrop of the continuous development of modern education, integrating the red gene into the daily ideological and political education work of college students requires a clear understanding of its practical significance, and establishing the basic principle of integration based on the red gene, further promoting reform and innovation in inheriting and promoting the red gene in universities, and comprehensively enhancing the ideological and political awareness of college students, Provide a strong talent force for China's socialist construction.

Keywords: Red Gene; College Students; Ideological and Political Education

Introduction

After a long struggle, the people of the CPC have formed a red gene in the process of continuous practice, which has been passed down to today. This set of ideological lines and fine style of work have a profound impact on the cause of higher education in China and the future destiny of the Party. Due to the abundant revolutionary spirit and excellent traditions contained in the red gene, it has irreplaceable value and function in the development of college students. In the daily ideological and political education work of college students, effective integration with the red gene can not only have a positive guiding effect on contemporary college students, but also better cultivate their patriotism, enabling them to become disseminators, inheritors, and practitioners of the red gene, and contribute their own strength to the harmony and stability of the motherland.

1. Overview of Red Gene Connotation

"Red gene" is a concept with Chinese characteristics and an important part of the discourse system of the CPC. Red gene is the general name of a series of advanced ideological factors bred by the CPC in the long history. It is an excellent tradition inherited by proletarian Revolutionary and the CPC in the fields of ideological theory, style practice, revolutionary morality, value pursuit, etc. It is the core of the revolution, the essence of the revolution, and the great cultural heritage of the Chinese nation [1]. In the blood of Communist Party members, the red gene is a never-ending and indelible thought that largely represents the spiritual will of Communist Party members, stimulates the sense of identity of all Chinese people, and can consciously inherit and promote the red gene. This is also the responsibility and mission of Chinese people.

2. The Problems of Integrating Red Genes into the Daily Ideological and Political Education of College Students

2.1 Small coverage

Integrating the red gene into the daily ideological and political education work of college students is a relatively challenging task. Due to the fact that the red gene covers multiple fields of content, it is necessary for universities to have rich channels for inheritance. Only in this way can they provide students with richer ideological and political education content, and greatly improve their

ideological level. However, from the current development situation, most universities still have a small coverage problem in inheriting red genes, which is not only detrimental to the inheritance and promotion of red genes, but also will not have a positive impact on college students. The main reason for this phenomenon is that universities have failed to play the main role of ideological and political theory courses, leading to a lack of development channels for the red gene. And because many universities will separate ideological and political theory courses as a separate course. However, this will lead to a downward trend in the educational value of professional courses, causing college students to only master a certain amount of red genes when studying ideological and political theory courses. This greatly limits the transmission channels of red genes, hinders the full coverage of red genes in universities, and also restricts the improvement of college students' ideological and political awareness.

2.2 Not highly valued

For universities, they are more concerned about improving their own educational quality and upgrading campus facilities, and do not attach great importance to the inheritance of red genes. Although most universities have realized the importance of introducing the red gene into their campuses and have begun various attempts. However, in the actual teaching process, the ideal educational goals have not been achieved. From this, it can be seen that the red gene only stays on the surface in the process of integrating into the daily ideological and political education of college students, and has not yet penetrated into students' practical activities, nor has a complete inheritance system been established. This will also lead to the inability of the red gene to play its own value in the ideological and political education work of college students, which is also not conducive to the long-term development of universities.

2.3 Lack of effective practical activities

When carrying out ideological and political education for college students in current universities, there is a tendency to prioritize theory over practice. In addition, college students only have three minutes of enthusiasm when participating in practical activities, and without proper guidance, they cannot gain anything from the activities. In this current situation, the inability to meet the inheritance goal of the red gene will also lead to a significant reduction in the educational achievements of practical activities.

3. The main path of integrating red genes into daily ideological and political education for college students

3.1 Prosperous campus red culture

In order to fully integrate the red gene into the daily ideological and political education work of college students, it is necessary for universities to vigorously promote the campus red culture, so that it can truly play its role and value, accurately grasp the ideological motivation and behavioral patterns of college students, always focus on students, let the campus red culture continue to flourish, and meet the spiritual and cultural needs of college students more. Under the influence of time, continuously strengthening college students' sense of identification with the red gene, stimulating their own learning enthusiasm, and being able to purify the soul, wash the soul, and pass on the complete inheritance of the red gene [3]. On this basis, universities should also create a red cultural dissemination atmosphere within the campus, so that college students can always adhere to the correct value orientation, uphold the spirit of red culture, and create a positive, popular, and socially influential red cultural masterpiece.

3.2 Integrating Red Genes into Tissue Education

We need to organically integrate the organizational construction and educational guidance of schools, and strengthen the educational responsibilities of various organizations in universities. One is to fully utilize the power of student organizations and integrate the red gene into activities such as student cadre training, professional skills training, and volunteer service in a series of training activities carried out by student unions and student studios. The second is to fully utilize the power of college youth league organizations and integrate the red gene into a series of education and activities carried out by youth league branches and party organizations, such as the "Green Horse" project training class, the branch party school party constitution training class, the branch party school joining party activists training class, party and youth league organizational life, and so on. While fully mobilizing students' ideological and political enthusiasm, we aim to enable them to have a deeper understanding of the connotation of the red gene and absorb its nutrients in the process of participating in educational activities, in order to achieve the educational effect of various organizations in universities.

3.3 Optimize the mode of ideological and political education

Because the red gene and ideological and political courses in universities share a common educational goal, promoting the efficient combination of the two and finding the correct entry point can have a significant impact on the ideological consciousness of college students. And this also requires ideological and political teachers in universities to timely change their educational concepts, effectively combine the red gene with the ideological and political education work of college students, comprehensively optimize the ideological and political education mode, and increase the learning emotional experience of college students, under the condition of in-depth exploration and research of the red gene. In this regard, university teachers should optimize and improve their education models when conducting daily ideological and political education, integrate the characteristics of the times, such as designing some themed teaching activities, such as "cloud learning real-life classes", "red character interviews and dialogues", etc., introduce characters and deeds related to the red gene into the classroom, provide detailed explanations for students, and deepen their understanding of the red gene during the understanding process, And effectively enhance one's own ideological and political awareness. In addition, with the rapid development of modern society, various information technologies have also been vigorously utilized and received unanimous praise. Therefore, university teachers should also keep up with the times and fully utilize the advantages of multimedia technology in ideological and political classroom teaching, playing movies, music, etc. related to the red gene for students. While allowing students to intuitively feel it, it can also stimulate students' thinking, and better inherit and promote the red gene.

Conclusion

The continuous impact of various information in modern society has also had varying degrees of impact on the ideology of college students. In order to enable contemporary college students to establish correct values, outlook on life, and worldview, universities should shoulder their own educational responsibilities and integrate the red gene into their daily ideological and political education work. Through a sound education management system, college students can establish their own cultural confidence in the continuous learning process, enhance their ideological and political awareness and moral literacy, This will have a profound impact on college students. In the process of inheriting the red gene, college students can draw wisdom and strength from it, thus forming a strong sense of identification with the Communist Party members and making up their minds to shoulder the responsibility of the times and inject new vitality into the cause of communism.

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Challenges and Future Development of Preschool Teachers in Preschool Education

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Abstract: This scholarly article aims at analyze the obstacles encountered by teachers who specialize in the transition from early childhood education to primary education, as well as the possible areas for their growth and progress. Through the utilization of a combination of qualitative and quantitative research methods, along with detailed case studies, we have identified a number of major challenges faced by these teachers. These challenges primarily center around psychological stress, disparities in educational philosophies, and the task of bridging the gap between home and kindergarten education. To promote the professional development of teachers specializing in this transition in the future, it is crucial to prioritize their mental well-being, implement policy reforms, and emphasize the importance of comprehensive qualities and innovative pedagogical approaches.

Keywords: Preschool Education; Preschool and Primary School Connection Teachers; Challenges; Future Development

1. Research technique

This study aims at gain insights into the challenges, issues, and needs encountered by kindergarten teachers through the analysis of 318 valid questionnaires and in-depth interview data from 30 teachers specializing in the transition from preschool education to elementary education.

2. The challenges faced by the kindergarten and kindergarten connection teachers

2.1 Heavy psychological stress and workload

Teachers specializing in the transition from early childhood education to primary education face significant challenges, including heavy psychological pressure and workload. In addition to the substantial amount of teaching preparation work, such as designing teaching plans and gathering teaching resources, these teachers must also navigate the demands of both preschool and primary education. Moreover, they must address the diverse needs and expectations of individual children and their parents. These multifaceted responsibilities can result in psychological stress for teachers. Consequently, the extensive workload may contribute to increased time pressure and stress levels for educators in this field.

2.2 Differences in educational ideas and practices

The difference between preschool education and elementary education poses another significant challenge to teachers who specialize in transitioning from early childhood education to primary school teaching. Firstly, the main goal of preschool education is to foster the comprehensive development of children, including cognitive, social, emotional, physical, and language abilities, whereas primary school education places more emphasis on subject learning and knowledge dissemination, with more specific and explicit teaching objectives. Secondly, the teaching content in preschool education mainly focuses on life experiences and topics that interest children, aiming at cultivate their interest in learning and curiosity, while primary school education is more subject-oriented, with

teaching organized according to subject curricula. Lastly, preschool education is typically based on games and free activities, with relatively relaxed classroom management. However, elementary education requires stricter discipline and management to ensure order and safety in children's learning. In practice, teachers need to adapt to these differences in educational concepts and practices and find a balance between the educational requirements of these two stages.

2.3 The improper connection between family education and kindergarten education

Family education and parental involvement is crucial factors in the work of professionals specializing in the transition from early childhood education to primary school teaching. However, one significant challenge faced by transition teachers in preschool education is the alignment of family education with kindergarten education during the transition to primary school. It is important to note that family education and kindergarten education may have different educational philosophies and approaches. While family education focuses more on parents' personal parenting styles and habits, kindergarten education emphasizes holistic child development and the cultivation of social skills. In order to ensure a harmonious blend and coordination among the philosophies of family education and the goals of kindergarten education, transition teacher need to establish effective connections between the two. It is not uncommon for some parents to lack understanding or confidence in kindergarten education, which can lead to confusion and challenges during the transition process. Therefore, professionals specializing in this area must actively communicate with parents, encourage their involvement in kindergarten education, and collectively focus on the child's learning and growth.

3. The future development of preschool education and preschool teachers

3.1 Reform of the education system and policies

The impact of educational system adjustments and policy support on the future development of professional teachers transitioning from early childhood education to primary education can be explored from the perspectives of role positioning, career development, and improvement of educational quality. Firstly, the adjustment of the education system can clarify the role positioning of professional teachers transitioning from early childhood education to primary education, establish a career path that suits their development, encourage cooperation among educators, and enhance the consistency between kindergartens and primary schools. This may involve coordinating textbooks, consolidating curricula, and communicating teaching methods between preschool education and primary education. Secondly, educational policies can formulate professional development training programs to provide continuous professional training opportunities for professional teachers transitioning from early childhood education to primary education. Establishing reward and recognition mechanisms can encourage their outstanding performance in professional development and innovation. Financial support can also be provided to encourage other relevant teachers to participate in research and practice projects related to the transition from early childhood education to primary education.

3.2 Emphasizing comprehensive quality and innovative education

The cultivation of comprehensive qualities, innovative spirit, and innovative ability has a profound impact on the future development of professional teachers transitioning from early childhood education to primary education. These educational concepts require teachers to focus on cultivating children's comprehensive qualities and teaching innovation abilities. Firstly, the educational goals and content emphasized by the cultivation of comprehensive qualities and innovative spirit are no longer limited to knowledge, but pay more attention to cultivating children's comprehensive qualities such as creativity, cooperation skills, communication skills, etc. Professional teachers transitioning from early childhood education to primary education will pay more attention to inquiry, cooperation, and problem-oriented teaching methods to stimulate children's innovative thinking. Secondly, the cultivation of comprehensive qualities and innovative spirit requires professional teachers transitioning from early childhood education to primary education to create a positive educational environment, break through teaching boundaries, and focus on cultivating children's innovation consciousness, enabling them to think actively and raise questions, better adapting to the innovative education in the primary stage, and cultivating their innovative spirit and confidence.

3.3 Pay attention to teachers' mental health, and provide professional training and career planning

In order to ensure the long-term and healthy development of the connection between kindergartens and elementary schools, it is necessary to focus on the mental health of professional teachers who are involved in the transition from early childhood education to elementary school education. This can be achieved by providing professional training and career planning, as well as enhancing the job satisfaction of specialized teachers. Firstly, the establishment of a teacher support center can provide psychological counseling services for professional teachers who are transition from early childhood education to elementary school education. Regular attention to their psychological state, timely identification and resolution of psychological issues, can contribute to improving their mental health and increasing their resilience to stress. Secondly, through the "quadrilateral" cooperation platform, relevant professional training and learning resources can be provided for professional teachers involved in the transition from early childhood education to elementary school education. This includes training in interdisciplinary educational knowledge, teaching strategies, and child psychological development. Such training can help improve their teaching abilities and professional competence, enabling them to better cope with the challenges of preschool and elementary education. Finally, in order to support the career development of professional teachers involved in the transition from early childhood education to elementary school education, A organization that provides assistance to teachers can be utilized to provide career planning and development support. This involves offering career counseling and guidance to help them establish personal career goals and development plans.

3.4 The rise of personalized education

The national education policy encourages personalized education, which has a significant impact on the content and methods of professional teachers transitioning from early childhood education to primary education. This is primarily reflected in aspects such as "emphasis on individual differences," "personalized learning plans," and "diverse teaching methods." Personalized education means that every child is unique, with different learning styles, interests, strengths, and challenges. Professional teachers transitioning from early childhood education to primary education will pay attention to children's learning preferences, such as a preference for more visual, auditory, or hands-on activities. By observing and interacting with children, teachers can better understand their learning needs and tailor their teaching strategies and resources for each child. At the same time, personalized education requires professional teachers transitioning from early childhood education to primary education to develop unique learning plans based on each child's individual characteristics and encourage the use of diverse teaching methods to meet the learning needs of different children. Emphasizing individual differences, developing personalized learning plans, and adopting diverse teaching methods are important measures for professional teachers transitioning from early childhood education to primary education to implement personalized education under the promotion of the national education policy.

3.5 Emphasize the use of family and community resources

The establishment of a collaborative platform and the implementation of a collaborative mechanism among schools, families, and communities is a crucial initiative in supporting the professional development of teachers transitioning from early childhood education to primary education. Such a platform and mechanism facilitate close cooperation between preschool and primary education, thereby providing collective support for the development of teachers involved in the transition from early childhood to primary education. Firstly, it is recommended that preschools, primary schools, parents, and communities establish working groups or committees to jointly develop strategies and plans for the transition from early childhood to primary education. Secondly, regular meetings should be organized among preschools, primary schools, communities, and parents to facilitate communication and exchange of ideas. It is essential to strengthen the connections and cooperation among various factors in order to effectively support the transition from early childhood to primary education, as discussed earlier. It is worth noting that the transition from early childhood to primary education is influenced by multiple factors, and their interconnections and interactions should not be overlooked in this context.

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Research on the Leading Role of Tutors in the Internal Guarantee of Postgraduate Education Quality——Taking Universities in Inner Mongolia as an Example

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Abstract: Nowadays, the scale of graduate education in our country has been growing, but the quality of graduate education has not been improved. Therefore, how to effectively improve the quality of postgraduate education has become the most concerned issue in the academic circle and universities, which directly highlights that the internal guarantee mechanism of postgraduate students to improve the quality of postgraduate education has become the focus of academic research, in which tutors are the main influencing factors of postgraduate education quality. The tutor plays a positive and dominant role in stimulating, demonstrating, modeling, guiding and infecting the postgraduate's behavior. This paper analyzes the existing problems in exerting the role of postgraduate tutors, and from the problems, puts forward the countermeasures and suggestions to exert and mobilize the initiative of tutors.

Keywords: Graduate Education Quality; Mentor Role

Introduction

Further promote the adjustment of disciplines and specialties, improve the level of the tutor team, improve the talent training system, and accelerate the training of high-level talents urgently needed by the country." The quality assurance mechanism of graduate education refers to the operation mode of mutual interaction, mutual influence and mutual cooperation formed by various subjects related to graduate education in a certain range (including macro, meso or micro levels) with the common goal of ensuring and improving graduate education. The role of tutors in the quality assurance of postgraduate education can not be ignored. This paper analyzes the status quo of tutors in improving the quality of postgraduate education, and makes a preliminary study on the lack of tutors' role and how to solve it.

1. Problems with tutors

The mentor's guidance to graduate students not only involves scientific research techniques and thesis writing, but also concerns personal growth and moral cultivation. Therefore, tutors play an important role in graduate education, and the degree of their guidance and training to graduate students is the key to the quality of graduate education.

1.1 Most of the graduate tutors are busy with their work and guide students too few times

This is the most important factor that tutors affect the quality of postgraduate education. Graduate tutors usually fall into two categories: on-campus tutors and off-campus tutors. Relatively speaking, on-campus tutors have more opportunities and possibilities to contact with graduate students than off-campus tutors. However, some tutors are very busy. On the other hand, they must assume certain administrative positions and engage in administrative work. This makes some graduate tutors too busy, resulting in the situation of too few times of guidance to graduate students. There are also many problems with outside tutors. On the one hand, it is difficult for off-campus tutors to participate in the whole process of graduate training, such as the formulation of graduate training plan, curriculum

setting, teaching and even the guidance of graduation thesis. On the other hand, the training unit lacks the binding force on the external tutors, because the personnel affiliation is not in the school, the single remuneration of the part-time unit and the non-fixed nature of the position make it difficult to restrain them. Due to the lack of guidance and supervision of tutors, some of the graduate students are lax in their learning and difficult to improve their academic level.

1.2 The teacher's teaching level is not high, the teaching method is outdated, and the teaching effect is poor

Due to the school system or their own reasons, some tutors did not update their knowledge in time, and their enthusiasm for scientific research projects was not high, and their academic level was relatively low, which seriously affected the learning quality and paper quality of graduate students. In addition, some tutors are also like other teachers in the school, teaching methods are outdated, lack of interaction, teaching effect is not ideal.

1.3 Some tutors only pay attention to the effect of graduate students, but ignore the quality of their training.

A few tutors have more subjects on hand, and usually assign the task of the subject to the graduate students, including the preliminary research, the summary and analysis of the research data, etc., virtually becoming the "boss" of the research subject, while the graduate students have become "employees", that is, the simple labor force to complete the research task. In this process, graduate students become a very passive tool to achieve utilitarian purposes, affecting the improvement of their overall quality, and eventually even damaging the social reputation of graduate education.

2. The countermeasures to improve the ability of tutors

In graduate education, the role of tutors is particularly important, tutors not only to impart knowledge and methods to students, but also to pass on the spirit and culture, but also to impart the correct way of being and doing things, so, tutors to students, is to explore and develop together with students. Since a high-level tutor team is an important guarantee for the quality of postgraduate education, it is necessary to improve the comprehensive strength of postgraduate students.

2.1 Strengthen the construction of teaching staff

First of all, rationally allocate the structure of teachers. On the one hand, it is necessary to select and employ teachers by classification and increase the proportion of applied teachers in graduate education. Entrepreneurs, managers, experts and scholars with practical experience and a certain theoretical basis can be hired outside the school to teach graduate students. At the same time, it can appropriately reduce the requirements for titles, scientific research achievements and other related conditions. This is quite common practice in Western countries. For example, the professional master's degree in social work in the United States generally requires that the teacher of the practical course should have not less than two years' working experience. On the other hand, the construction of "double-qualified" teachers should be carried out. "Double teacher" is a teacher with "double teacher quality" or "double teacher qualification". Among them, "double teacher quality" means that teachers have both the professional quality of teachers and the quality of related industries, and "double teacher qualification" means that they have both the teacher qualification (certificate) and the professional qualification (certificate). Training units can cooperate with enterprises and public institutions, so that teachers can also have the opportunity to exercise part-time in the unit, constantly improve their knowledge structure, and enhance the ability of theoretical teaching and practical teaching.

2.2 It is necessary to cultivate the sense of responsibility and talent concept of tutors and establish the teacher responsibility system

Supervisors should not only be responsible for their own job responsibilities, academic status and academic reputation, but also for the quality of their graduate students. The first is to break the inherent concept of graduate student quota allocation, optimize the graduate student allocation mechanism, and appropriately tilt the graduate student quota to the strong ability, energetic, fruitful and responsible tutors; The second is to establish and improve the evaluation mechanism of tutors' guidance ability, pay attention to the cultivation and evaluation of the practical ability and academic ability of tutors inside and outside the school, reasonably evaluate the

guidance level of tutors, and effectively guarantee the quality; The third is to break the lifetime system of tutors, establish a dynamic adjustment mechanism, and appropriately reduce the number of tutors who are irresponsible, ineffective in guidance and not at a high level, and terminate the qualifications of tutors if the circumstances are serious.

2.3 Explore the graduate training mode of the tutor team

The graduate tutor team is a group composed of a small number of complementary and interrelated graduate tutors who assume corresponding responsibilities for the realization of a specific purpose. In postgraduate training, there are many research directions in the same major, and after all, the field of a supervisor's mastery is limited, and the level of the supervisor is also uneven. A mentor team composed of mentors with different knowledge backgrounds and academic expertise can change the defects of limited knowledge and narrow professional field under the guidance of a single mentor in the past. The interactive contact between graduate students and different instructors can learn from each other and form the cross-integration of multiple disciplines. In order to improve the quality of graduate training, it has become an objective demand to carry out the graduate training mode of tutor team. First of all, the echelon structure should be reasonable. A reasonable mentor team should be composed of mentors of different educational backgrounds, different professional expertise, different disciplinary backgrounds and different age levels, with reasonable knowledge structure, high scientific research level, strong innovative ideas, and full of vitality and vitality and sustainable development. At the same time, the members of the tutor team should be relatively stable to ensure the continuity of work. Thirdly, academic exchanges should be active. Regular academic exchange activities are held between tutors, tutors and students, and students and students to report the progress of scientific research. Tutors should also provide opportunities for students to go out and communicate, and invite experts from outside to make academic reports from time to time.

Peroration

The construction of graduate education quality assurance mechanism is not only an important part of the development of the graduate education quality assurance system in Inner Mongolia, but also an insurmountable stage of the comprehensive guarantee of graduate education quality in China, in which the role of tutors cannot be ignored. Therefore, it is necessary to give full play to the guiding role of tutors in the construction of postgraduate education guarantee mechanism, and the main goal should be to build a comprehensive, controllable and practical postgraduate education quality guarantee mechanism, and develop towards the direction of high-quality training of talents.

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Some Thoughts on the Construction and Reform of Postgraduate Textbooks in Colleges and Universities—Taking Z University as an Example

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Abstract: "Accelerate the construction of a strong education country, strive to open up a new situation, and consolidate the foundation of the country's prosperity and strength." On May 29, 2023, General Secretary Xi Jinping stressed that education, as an important foundation for national development, should accelerate the pace of reform and innovation. As the cradle of talent training, colleges and universities should fully recognize the country's urgency for high-level talents, and further breakthroughs should be made in the reform and development of education and teaching. Textbook construction is an important measure to strengthen China's academic construction and promote the development of China's education. At present, it is still facing problems such as slow renewal speed, single form of expression and low utilization rate of achievements. Taking Z University as an example, this article briefly discusses some suggestions for the construction and reform of postgraduate textbooks in combination with the actual situation.

Keywords: Postgraduate Textbook Construction; Teaching Material Construction Characteristics; Problems and Countermeasures

Introduction

For the first time, the report of the 20th National Congress of the Communist Party of China clearly put forward the important task of "strengthening the construction and management of teaching materials", which provides a clear direction for the reform of education and teaching in colleges and universities. China's education with the times has now become the world's largest higher education system. According to the latest data released by the Ministry of Education, the total number of students in China exceeds 44.3 million. The large number of people reflects, on the one hand, that China's national cultural quality foundation has gradually become strong, and on the other hand, it also requires higher standards for higher education teaching. In education and teaching, teaching materials are the most basic form of display in the teaching process, and textbook construction is the basic work of postgraduate education. As a "double first-class" university in finance and economics, Z University has high requirements for discipline development and student training. In recent years, the construction of postgraduate textbooks has also been improved in the reform of postgraduate education and teaching, but there are also phenomena that the utilization rate of textbook construction achievements is not high and front-line classroom textbooks are old. Through the literature research method and interview method, the author analyzes the construction mode of foreign postgraduate textbooks, and combines the management of postgraduate students in the school, and puts forward targeted suggestions on the problems faced in textbook construction.

1. Current problems in the construction of teaching materials

The update speed of textbooks is slow, and there are "old" and "old" problems in class textbooks. Although the teacher's teaching method consists of textbooks, courseware (PPT display), group discussion, case teaching, etc., there are generally corresponding class materials for students to learn more deeply when teaching courses. However, some courses also have slow textbook updates, and now students are also using old textbooks many years ago. Through interviews with some college teachers, teachers still have a lot of controversy about the selection of textbooks. There are situations where teachers in different disciplines in the same college disagree

with the knowledge school. It is impossible to unify the selection of new textbooks, but choose to continue to use authoritative old textbooks. On the other hand, the number of authoritative textbooks recognized by the industry is relatively small, and the high-quality output is not proportional to the existing needs. There are also teachers who need to reabsorb and transform the energy costs when receiving new textbooks and ideas, resulting in the slower selection and updating of textbooks.

The utilization rate of school textbook construction results is low. The school's centralised management department has been exploring and trying to carry out work on postgraduate teaching materials. The school has a postgraduate high-quality textbook project, a professional master's teaching case collection construction project, an online course construction project, etc. The project has undergone a strict review stage. The project leaders are all outstanding discipline leaders of the school, and have invested a year or more of energy in the construction of textbooks. The school has also invested a large amount of scientific research funds to organize and publish, and finally formed high-quality textbooks. However, the utilization rate of textbooks after publication is low, and it is not really used in front-line teaching. After visits and research, it was learned that the quality of textbook construction is uneven and cannot be used as a postgraduate textbook. Through understanding, if teachers have the advantage of bonus points in evaluating professional titles after receiving the completion of scientific research projects supported by the school, on the one hand, teachers are encouraged to actively participate in project construction applications, but on the other hand, there is also a phenomenon that the polishing of project construction results is not enough and the effect is not up to standard.

We don't pay enough attention to the construction and development of teaching materials. The construction of postgraduate textbooks is an important link in the reform and development of education and teaching, but at the same time, many projects have been launched, and the investment in textbook construction projects is limited. The construction of textbooks belongs to the training office of the graduate school, which is part of the work of a staff member. The promotion and innovation of textbook construction is limited, and the effect of textbook construction has not reached the expected standards and effects. The project construction supervision work is not detailed enough, and the quality control professional degree is limited. In the textbook construction projects organized at the school level, only anonymous evaluation is carried out at the time of project establishment and project completion. There is a lack of guidance and supervision in the process of project construction. When accepting and accepting textbook construction projects, there will be delays or poor quality of results. There is a lack of application channels for textbook construction projects to superiors, and school management. The department's publicity and guidance are not enough, the teachers' expectations for the results of the school-level textbook construction project are not enough, and the confidence in the results in the front-line classroom is insufficient.

2. Suggestions on Countermeasures for Textbook Construction and Reform

For the high-quality and high-standard development of textbook construction reform, we must first clarify the goal of textbook construction reform, be "new", "specialized" and "inspiring", formulate effective policies and guidelines, fully stimulate teachers' enthusiasm for textbook construction, and finally put the results into the classroom, and provide students with more knowledge choices and learning ideas.

To improve the speed and selection of textbook construction, the first is to innovate the form of course textbooks. Textbooks are not only displayed to students in traditional paper formats, but also can also be built online courses. Referring to online teaching, such as Mu class, micro-class, etc., promote the construction of online textbooks, and put classic old textbooks and innovative and reformed new textbooks on the online platform in the form of informatization. In the process of online textbook construction, videos of textbook chapter explanation and after-class exercise analysis can be added to enrich the expression form of online textbooks, guide and inspire students' self-study ability to the greatest extent, and also provide effective support for personalized learning, expanding the coverage of high-quality educational resources and educational modernization. Second, in terms of textbook selection, on the one hand, the selected textbooks and course materials selected must be selected by teachers, and with the approval of the college and dean, it must be decided that they must come from members of the professional committee of the discipline or teachers who understand the course. College departments that provide multi-part courses are encouraged to use the same textbooks and materials in all parts of a semester. On the other hand, different teaching materials can be selected according to the type of course. For example, the core compulsory courses are customized for the discipline professional committee, and professional courses and elective courses are free to choose textbooks. The teaching methods can be flexible and diverse. Compulsory courses represented by professional courses and basic

subject courses are mainly taught by textbooks, and elective courses represented by elective courses and subject elective courses can be taught in various forms. The selection of teaching materials can be dominated by teachers.

In terms of improving the utilization rate of school textbook construction achievements, first, the centralized department of school management should comprehensively improve the influence of school-level textbook construction projects, strengthen cooperation and contact with high-quality publishing houses, further sort out the development path of textbook construction projects, and improve the management methods for quality improvement in textbook construction projects; second, organize the construction of teachers' textbooks, first of all, clarify the training plan and training goals of postgraduate students, focus on the construction of disciplines, reform and update the content of textbooks, and vigorously strengthen the construction of textbooks in basic disciplines, emerging disciplines and interdisciplinary disciplines. Secondly, the construction of textbooks should broaden the scope of textbook editorial team, strengthen inter-school cooperation, while ensuring the construction around the characteristics of this discipline, encourage cooperation with peer experts, and pay attention to the high quality of textbooks; Third, establish the important position of textbook construction in the reform of education and teaching. Textbook reform is not only to reorganize the content of books, but also the most basic cornerstone of students to improve their innovative ability and understand knowledge and methods. It is of great significance to the cultivation of high-level talents. Teachers should adhere to the original intention of teaching and educating people, improve their political position, and complete the important task of textbook construction with a high sense of responsibility. School management departments need to strengthen training and guidance on the construction of teacher textbook projects, hold relevant launch meetings, encourage experts and scholars to take the lead in construction, enhance academic exchanges among teachers, improve team cohesion, and steadily promote the implementation of textbook construction achievements.

In order to pay more attention to the construction and development of teaching materials, we must fully recognize the importance of textbook construction. The construction of postgraduate textbooks is a long-term task, and it is necessary to formulate goals at different stages and be consistent. First, from the national level to institutions of higher learning, we should attach importance to and strengthen the construction of postgraduate textbooks, take this work as a long-term goal and task, and set up special institutions for unified management. Second, attach importance to the design and compilation of the construction of basic courses for postgraduate courses, and explore the deeper learning method and inspiration of thinking logic of the content of undergraduate professional teaching materials, which is different from undergraduate textbooks but further extended on the basis of undergraduate textbooks. Explore the construction of new interdisciplinary textbooks, and integrate and summarize the problems of overly classified disciplines and many professional categories. Third, we should attach importance to the consistency of textbook construction and discipline development. Textbook construction is the core link around discipline development, talent training, scientific research work, teaching methods and other aspects. Several of them complement each other. The discipline should carefully analyze the current situation of professional construction. While doing a good job in the construction plan of disciplines and majors, formulate practical textbook construction plans according to their own characteristics to ensure that textbook writing goals are clear and tasks are implemented, and consistent with curriculum goals, discipline development and talent training goals. Fourth, strengthen the construction of awareness of the localization of textbooks. We should not blindly emphasize the advantages of foreign original textbooks, especially disciplines with strong Chinese culture. We should strengthen our ability to write textbook knowledge, encourage active participation in academic exchange conferences at home and abroad, activate creative ideas, and learn and absorb the construction of our own high-quality textbooks.

As an infrastructure link in the plan to strengthen the country in education, textbook construction needs to adhere to systematic development and make efforts to promote it in an overall way. It is necessary to deeply explore the difficulties faced in the construction of teaching materials, formulate corresponding reform methods and make effective breakthroughs one by one. We should further combine the integration of digitization and textbook construction to create a breakthrough in the new advantages of educational development to achieve fairness and transparency in the construction and development of textbooks; strengthen the supervision and selection norms of textbook construction, and strictly control the quality of textbooks; try to establish a textbook selection library, encourage teachers to choose suitable new textbooks according to training goals and training plans, and strengthen the publicity and use of high-quality textbooks in our school. As the leader and pedestal of the development of a powerful educational country, higher

education should take responsibility in the reform of education and teaching, actively and orderly promote the construction of teaching materials to develop steadily, and provide better support for the training of high-level talents.

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Exploration of Talent Training Mode Based on Output-Oriented Intelligent Toy Design and Development

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Abstract: The concept of output-oriented education has been introduced for many years in our country and has been widely used in the process of personnel training in Chinese universities. This paper discusses how the concept of Outcome Based Education can be fully integrated into the process of developing talents in an interdisciplinary and collaborative manner in the context of new engineering. We have made useful explorations in various aspects from curriculum system integration, online teaching resources construction, studio-style course organization mode, rich teaching project library to school-enterprise cooperation project practice, etc., which have improved students' learning effect.

Keywords: Output-Oriented; Toy Design; Talent Model

1. Theoretical basis and development status of Outcome Based Education

"Outcome Based Education (OBE) is an educational "system" that emphasizes the development of competencies: it has a comprehensive design, implementation, evaluation and assessment concept around the improvement and achievement of training objectives. Learning output-based education models first emerged in the basic education reform of the United States and Australia. From the 1980s to the early 1990s, OBE was a popular term in American education circles. "An Output-Based Education Model: Controversies and Answers" written by American scholar Spady W.D.[2], describes the characteristics of a college or university conducting an OBE: 1) The school has a consensus mission statement, a commitment to make all students successful, and provides a means to translate that commitment into action; 2) Clearly promulgate the final results that students must demonstrate before graduation; 3) A curriculum system, curriculum and teaching unit outcome framework that achieve final results; 4) A multi-modal instructional support system that provides multiple opportunities for students to demonstrate achievement of requirements. 5) Have a program to improve support systems (employee accountability, effective leadership and employee collaboration, etc.). He sees OBE as a paradigm shift in education[3]. After the Accreditation Board for Engineering and Technology (ABET) promulgated and implemented the EC2000 accreditation standards that value student output, from the end of the last century, engineering education accreditation organizations in Europe and the United States have reformed their accreditation standards one after another. The majority of Washington Accord member countries (or regions) have adopted "outcomes-based" accreditation standards, which measure student performance as the basis for teaching outcomes and promote continuous professional improvement as the ultimate goal of accreditation.

In China, Shantou University carried out the practice and exploration of OBE engineering education mode in 2012 and built up the cultural atmosphere and organizational management system suitable with OBE education reform. The practice of Shantou University shows that the concept of OBE can be "localized" for our use, it is helpful to make the goal of talent training in colleges and universities. In 2018, Shaanxi University of Technology began to implement the professional accreditation standard of results-oriented education (OBE) concept.

2. The development of intelligent toy design and development talents training in Changsha Normal University

The higher education teaching of toys has been developed in China for many years. Changsha Normal University set up the toy design and manufacturing major in the junior college stage. In 2009, it was awarded the provincial characteristic major, and in 2010, it was awarded the China Toy Talent Training Base by the China Toy Association. After the university was upgraded to undergraduate, it became a toy design direction of Industrial Design undergraduate major and an intelligent toy direction of Electronic Information Engineering (Electronics) undergraduate major, and the two majors were trained independently. However, the actual situation is that the electronics profession is more focused on the general sense of electronic product design, embedded system development, and intelligent electronic toys are just one of the many electronic products, not very targeted. The major of Industrial Design is more oriented to the talent training of industrial design industry, and toy design is only a sub-direction of creative shape design in industrial design. In order to respond to the trend of interdisciplinary and industrial crossover, students' comprehensive abilities such as creative design, electronic engineering and mechanical engineering are cultivated to improve their interdisciplinary learning and thinking ability. The School of Information Science and Engineering of the university organized industrial design and electronic information engineering majors to carry out collaborative training of intelligent toy design and development talents with the OBE education concept as a guide. In the integration of the curriculum system, the construction of online teaching resources, the construction of professional workshops, and the practice of school-enterprise cooperation projects, guided by OBE, students are required to complete comprehensive projects oriented to practical tasks during school, and to cultivate talents with responsibility and responsibility, good communication and cooperation, who have both creative design ability[9] and engineering practice ability.

3. Cultivation model of intelligent toy design and development talents based on OBE

3.1 Curriculum system of interdisciplinary application-oriented talents training

The curriculum consists of two main sections: the theoretical system and the practical system. In the first year of college, students will be provided with professional elective courses and academic reports to build interdisciplinary knowledge and qualities related to the development history of toys, electronic technology and computer technology. Intelligent toy programming, intelligent toy development and production for Industrial Design students in sophomore and junior years, and toy design and 3D printing for Electronic Information Engineering majors. Breaking the original practice of each major working separately, students from both majors can absorb the most needed theoretical knowledge and practical skills in application. In junior and senior years, we can set up centralized practice sessions, relying on electronic innovation laboratory, robot laboratory and toy creative studio, introduce enterprise research topics, teachers' research projects and students' self-created projects, and build interdisciplinary teams to complete corresponding projects with OBE cooperation and actual toy works as the goal. According to the development and performance of students, participate in discipline competitions, declare students' innovative practice projects, expand their horizons in practice, and expand achievements in the form of competition awards, papers, projects and patents.

3.2 Interdisciplinary integration, construction of high-quality online course resources

According to the above intelligent toy design and development talent cross-professional training mode involves electronic information courses, computer programming courses, toy creative modeling and 3D printing courses. Although there are related courses in the university's electronic information engineering and industrial design majors, the construction content needs to be more focused and actionable in a course that targets the output of the specific object of smart toys based on the original curriculum. According to the organizational form of the course, we develop programs that meet the requirements of public and elective courses and create high-quality courses to facilitate the acquisition of information and the application of advanced ideas to serve teaching and learning. At present, it has built several provincial first-class courses such as "Ergonomics", "C Programming" and "Digital Electronics", etc. In addition, there are also several university-level high-quality courses such as "Innovative Toy Design and

Realization", "Toy Model Making", "Computer-Aided Industrial Design" and "Toy Materials and Technology", etc., under construction to enrich students' learning resources.

3.3 Promote the studio form of organization of interdisciplinary integration courses

To study the organization of the curriculum for inter-professional integration, the existing domestic practices include: ① Set up experimental classes, pilot classes and school-enterprise classes from multi-major enrollment students, and set up an independent training system; ② The original professional classes remain unchanged, and experimental classes are set up outside the original curriculum system to provide additional content of corresponding knowledge. For the specific situation of the school, it is adopted the second option without changing the original professional operation of the college. Relying on the projects of Toy Studio, CMF Studio and Electronic Innovation Studio, we fully carry out practical teaching in combination with public elective courses and elective courses. The studio is used to carry out teaching activities outside the classroom to improve students' practical operation ability and teamwork consciousness. The project-based teaching process helps students better digest what they have learned in class and put it into practice. We will actively carry out "Industrial Design Competition for University Students", "National Student Digital Media Technology Works and Creativity Competition", "legal Literature and Innovation", "Packaging Creative Design Competition", "Yunhe Wooden Play Creative Design Competition" and other competitions to strive for more breakthroughs.

4. Conclusion

Output-oriented talent training emphasizes the clarification of student output results, which are integrated into the professional training model, and the setting of reasonable achievement paths and output guarantees, which is a widely recognized education model. Changsha Normal College is guided by the concept of OBE education, reforming the curriculum system and course organization, refining topics to enrich the teaching project library, strengthening school-enterprise cooperation, and deepening project output practice. After years of practice, the educational concept of OBE thinking has been comprehensively penetrated, and the results are more remarkable. The migration of students' employment to the toy industry is remarkable, the innovative and practical ability of students have been enhanced, with a significant increase in the number of students winning provincial and national awards.

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Analysis of Strategies for Cultivating College Students' English Reading Comprehension Ability

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Abstract: Reading comprehension ability, as a key skill that needs to be developed in English teaching, has attracted high attention from teachers and students in universities. This is not only due to its relatively large proportion in English exams, but also due to the entering of the information age, people need to obtain information from the text through extensive reading and gain a profound understanding of the content of the article. Therefore, in the process of guiding students to learn English knowledge, teachers must take cultivating students' reading comprehension ability as the central link of teaching activities. Through exploring and researching it in teaching, students can improve their reading comprehension level and enable them to have a deeper understanding of the profound connotations to be expressed in future English texts.

Keywords: College Students; English; Reading Comprehension Ability; Training Strategies

Introduction

Entering university, cultivating students' English reading ability is equally important. As one of the important means for people to learn a language and obtain machines from it, teachers must focus on cultivating students' English reading ability when guiding them to learn English knowledge. It is not only limited to answering reading comprehension questions, but also reflected in daily life applications. Therefore, in the future process of English teaching, teachers should adopt effective strategies to cultivate students' English reading ability as the central link of teaching work, so as to fundamentally ensure that students' English knowledge level becomes higher.

1. Teaching from reading materials

In traditional English teaching activities, teachers have relatively limited teaching methods and boring content. This will cause students to develop some aversion to English knowledge during the process of repeated learning. When teaching, teachers must focus on cultivating students' interest in learning to carry out teaching work. This is because interest is the best teacher. Therefore, when teaching reading, teachers must make appropriate adjustments to the teaching process based on students' choices and optimize the reading content. Adopt certain standards and allow students to enrich their knowledge system by reading some text materials. When the reading materials meet their requirements in a certain aspect, reading will bring them a good sense of satisfaction. On the contrary, if the materials and students' needs cannot be integrated with each other, it will be difficult to effectively stimulate students' interest in learning, and it may even lead to a sense of exclusion in the process of learning English knowledge. Therefore, teachers must adopt the following methods to enable students to form a certain liking for reading materials.

1.1 Promoting the content of reading materials to be more interesting

As students enter the university stage, they already have a certain amount of knowledge reserves. Therefore, if teachers still adopt the teaching mode of middle school or even elementary school, it is already difficult to effectively attract students' interest in learning. Therefore, when guiding students to improve their reading ability, teachers should use content familiar to students or content that can arouse their interest in learning to carry out teaching. Generally speaking, students prefer materials such as entertainment, jokes, and humorous stories. Therefore, before guiding students to improve their reading comprehension ability, teachers should use internet

platforms and other methods to collect relevant theme materials for students to learn, so that students can deeply experience the fun and knowledge of reading materials through in-depth learning. Teachers can actively guide students on the side to ensure that students can receive guidance from teachers, Continuously optimize one's understanding of the corresponding content.

1.2 Enhancing the practicality of language

When reading, teachers should try their best to provide students with more authentic reading materials and reading environments, so that they can widely apply them to practical life after completing the reading. Due to the development of the times, teachers should also cite the latest materials when selecting reading materials, so that students can have a sense of closeness to reality and closely integrate the content of the text with their actual life. This can enable students to continuously improve their reading ability with the assistance of teachers.

1.3 Appropriate length and rich content

When teaching reading, teachers must make flexible adjustments to the design of the length. If students read long articles, they will gradually lose patience during the reading process. Therefore, teachers should choose texts with moderate length and relatively rich connotation for students to read, such as celebrity anecdotes, myths and legends, Folktale, popular science articles, etc. However, it is worth noting that when selecting articles, teachers should ensure that the articles are in a flexible, diverse, vivid, and interesting state to avoid students from only understanding the relevant knowledge of a single content during the reading process. However, the failure to continuously expand one's knowledge through reading has led to the delay in effectively improving students' reading skills.

1.4 Adopting diverse genres of text

When selecting materials, teachers should explore multiple types of articles and increase the proportion of narrative articles appropriately to ensure the existence of multiple texts, enabling students to form a certain understanding of all text types through reading. In addition, when guiding students in reading, teachers should design some popular science articles so that students can deeply understand their connotations through reading. This is because different articles have different reading methods and the proposed questions during exams are also different. If a single reading method is used to guide students in their learning, it will greatly affect their learning effectiveness. However, it should be noted by teachers that regardless of the theme of the article they choose, it should be consistent with the content of the textbook. But it should not be a simple repetition of the content of the textbook, but rather a certain degree of extension and supplementation of the content of the textbook. Only in this way can students continuously improve their understanding of textbook knowledge during the reading process, thereby bringing certain help to better optimize students' reading ability.

2. Developing students' learning methods

2.1 Adopting group mutual learning method

When students are reading text, if they only read the text themselves, although they are able to immerse themselves in the content of the text, certain limitations caused by their own thinking abilities will make it difficult for them to understand the profound implications during the reading process. Therefore, when guiding students in reading, teachers can form a certain understanding of the relevant content by having students discuss in groups. When guiding students in reading, teachers should divide them into equal groups, with one person serving as the group leader. After quickly reading the material, other students can tell the team leader the corresponding content of the material, and the team leader can also draw up some questions based on the text content for students to answer. Finally, the team leader will summarize the students' answers. When all students are unable to answer questions, teachers must engage in close communication and exchange with students to solve the doubts that exist in their hearts. This not only enables students to learn English knowledge about reading comprehension in a relaxed and pleasant atmosphere, but also enables students to form a good team academic spirit under the model of group mutual aid Cooperative learning, and thus develop the habit of multi-dimensional thinking.

2.2 Infiltrating cross-cultural teaching in reading

Students have a relatively strong thirst for knowledge and curiosity, especially for their unfamiliar foreign culture. The reading materials involved in English textbooks are very rich, and cross-cultural knowledge is also very diverse. In fact, the process of learning

English knowledge is a process of understanding cross-cultural knowledge. Therefore, when guiding students in learning, teachers must truly understand the corresponding content of the reading materials, and thus form a preliminary understanding of the customs, habits, religions, and other knowledge of English speaking countries. In the process of teaching activities, teachers can use multimedia devices to visually present these contents in front of students, and through comparison, students can fully understand the differences in customs, habits, language, religion, and other aspects between China and English speaking countries. This enables students to deeply understand the basic connotations expressed in English articles through learning. During reading, cross-cultural teaching can also be used to form a preliminary understanding of the corresponding content. This not only enables students to enhance their reading comprehension skills through in-depth learning, but also allows them to form a deeper understanding of the relevant content of English speaking countries.

2.3 Summarize the corresponding content during the reading process

To fundamentally improve students' reading comprehension ability, extensive reading is a very important way. However, simply reading materials without thinking and summarizing will result in students being unable to cultivate their logical thinking ability, which in turn will lead to a relatively weak reading comprehension ability. In the process of reading teaching activities, students must be diligent in thinking, summarizing, and summarizing the central idea based on the corresponding content of the text. During this period, teachers can stimulate students' thinking through question guidance, such as "What is the central idea of this article? What is the main content expressed in this article?" and encourage students to answer the teacher's question in English. This can not only fully activate students' thinking, but also enable teachers to better understand some of the problems students have in reading during the process of reading teaching activities, thereby bringing certain help to gradually optimize students' logical thinking ability.

Conclusion

Overall, after entering the university stage, the important role of English knowledge still does not exist for students. Decline, especially when entering the university stage, students often involve some English knowledge when learning knowledge. Therefore, it is particularly important for students to accurately understand English texts. In this context, cultivating students' reading comprehension ability should be regarded as the central link of English teaching work. Therefore, teachers should adopt diversified approaches in teaching to cultivate students' reading comprehension abilities, such as enhancing their practical interests. Cultivate students' reading skills, etc. These methods can to some extent ensure that students continuously improve their reading ability while reading English text content, thereby bringing a certain promoting effect on gradually strengthening students' reading level.

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Exploring the Innovation of Online Ideological and Political Education Models in Universities

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Abstract: With the continuous development of science and technology, network technology has been applied to various fields, and the education model of universities has also made innovations with the application of network technology. In ideological and political education in universities, influenced by traditional educational models and other factors, the quality of education is uneven, and the learning effectiveness of students needs to be improved. Therefore, integrating network technology and innovating teaching methods in ideological and political education in universities is very important. Conducting online ideological and political education in universities can enhance students' interest in learning, while also helping them develop good moral qualities and providing assistance for their future development. This article focuses on the research goal of ideological and political education models in universities, exploring the importance and methods of integrating online ideological and political education in universities, hoping to provide some help for relevant universities.

Keywords: Universities; Network; Ideological and Political Education; Innovative Exploration

Introduction

In today's society, the information age has fully arrived, and network technology has permeated various fields of people's lives, reflected in healthcare, shopping, and transportation, and has achieved excellent results. The application of online education in the education industry is an inevitable trend of the times, and it is also an important method to improve teaching quality. The main function of the internet is to disseminate information, and its working mode has strong convenience, which can save educational time, improve educational efficiency, and ensure educational quality. It is an important battlefield for the development of higher education today. Online ideological and political education in universities can first enrich educational resources, understand educational information, enhance students' learning enthusiasm, and also timely understand students' learning situation. Online education is beneficial but harmless for the development of ideological and political education in universities.

1. The characteristics of online ideological and political education in universities

The main purpose of online ideological and political education in universities is to promote the group of college students to better complete their ideological and political learning and cultivate their core competencies through internet technology. The implementation method is to carry out ideological and political education courses and some virtual education activities to complete teaching tasks through this method. The characteristics of online ideological and political education in universities are mainly reflected in the level of educational content. Firstly, online ideological and political education in universities is a product of the development of network technology, and is influenced by objective factors in the actual teaching process. The mode of online education has changed from offline teaching to online platform teaching, and universities upload course content to the cloud through online media and other means, Manage educational processes and content through the university education system. In terms of educational content, online ideological and political education in universities can achieve the exchange of ideological and political education information and student ideological exchange information, achieving true information exchange. Teachers can timely understand students' learning achievements and ideas, and further help students complete their own moral quality construction.

In addition to traditional textbook education content, online ideological and political education in universities also has advantages such as wide coverage, strong popularity, and fast update speed. This means that university online platforms can also collect learning and information materials from various aspects of society, ensuring that students' educational acceptance can keep up with the pace of the times. Universities can also set up free learning sections such as comment columns and education columns on online platforms, allowing students to fully interact online while receiving the influence and influence of ideological and political education. The setting of this educational content can enrich the content of ideological and political education in universities and improve the quality of education.

2. Challenges Faced by Online Ideological and Political Education in Universities

After experiencing educational reform, major universities have placed greater emphasis on improving students' core competencies. For the education industry, schools also hope to see the overall progress and development of college students. However, influenced by various factors such as traditional educational concepts, it is difficult to improve students' learning enthusiasm, cultivate students' moral character construction, and cultivate students to become compound talents with morality, discipline, and ability in actual online ideological and political education in universities. The innovation of this teaching concept has high requirements for the teaching level of teachers, and there are also certain restrictions on the construction and maintenance of online ideological and political education platforms. Schools need to ensure their own faculty construction and the stability of the education platform. In other words, the main purpose of innovation in online ideological and political education in universities is to update teaching concepts and innovate teaching methods. However, the ultimate goal of online education platforms and traditional education models is the same. Both schools and teachers aim to improve students' academic performance, cultivate their comprehensive abilities, and enable them to possess excellent moral qualities and legal concepts. Online ideological and political education in universities only provides convenience for current university education in line with the development of the times, while it is the teachers who actually determine the learning effectiveness of students. Online education is only a platform, and teachers are the lighthouses that can guide students towards the right path.

3. Strategies and Methods for Innovation in Online Ideological and Political Education in Universities

Universities should first strengthen network construction to ensure the stability of online education platforms. From the perspective of educational policies, universities can recruit professional talents to manage the network, build stable, abortion, and convenient education platforms, and be responsible for daily platform maintenance work to ensure the stability of online ideological and political education platforms. In addition to the construction of online education platforms in universities, universities should also pay attention to the construction of online education platform content, and make the online platform a unique learning home for students. There are many ways to choose a teaching platform, including the WeChat official account platform and the education and learning system. The WeChat official account platform is easy to operate. Schools can apply for the official authorization of the WeChat official account, and then set the corresponding learning content inside the official account, so that students can pay attention to the official account and accept the daily news push of the official account. Educational learning systems mainly exist in the form of websites or apps, with the main characteristics of comprehensive learning content, clear and clear learning layout, and simple operation. Regardless of the method used by schools to build online education platforms, educational goals can be achieved. In addition to setting up basic teaching content on online education platforms, schools can also create ideological and political education columns, which mainly focus on social facts and national policies, allowing students to explore independently and improve their learning enthusiasm. In addition to the content related to ideological and political education, schools can also integrate some academic knowledge, technological achievements, entertainment news, art appreciation and other elements into online education platforms, increasing the browsing volume of online education platforms. Universities also need to create chat rooms, allowing students and teachers to freely speak and discuss current hot topics on online education platforms. The setting of ideological and political education columns can also elaborate on students' future development. Schools set up future employment columns on online education platforms, expressing the future development situation, employment prospects, employment salaries, and other contents of different majors, allowing students to have a clear and clear understanding of their future development, and providing guarantees for promoting

students' healthy growth.

Conclusion

In summary, online ideological and political education in universities has now achieved comprehensive popularization. Students can complete course check-in, course preview, and score inquiry work online, improving learning convenience while developing the education industry in universities. The content of online ideological and political education in universities has now become an inevitable result of the development of education in the new era. Universities should make sufficient preparations to integrate network technology into ideological and political education through publicity, education, discussion, and other means, achieve great innovation in education, and promote the comprehensive development of students, providing excellent composite talents for society.

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The Curriculum Design of Junior High School Physics Activities Based on the Concept of STEAM Education——Taking "the Design and Production of Floating Sinks" as an Example

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Abstract: "Physics Curriculum Standards for Compulsory Education (2011 Edition)" requires that physics teaching in junior high schools should focus on the development of students' scientific abilities, including the development of scientific knowledge and skills, scientific methods and attitudes. In view of the problems existing in middle school physics teaching such as being out of touch with real life, lack of interest, and traditional indoctrination teaching, integrating STEAM education concepts into physics experiment courses can greatly improve the interest of physics teaching and put students first. , teachers as instructors and assistants to improve the existing problems in the current physics teaching. Therefore, how to reasonably apply the STEAM education concept to the physical experiment course is a question worth exploring. I take "the design and production of floating sinks" as an example. The general idea is to build the main line of classroom teaching: the smoothness of knowledge logic, the progress of students' cognitive laws, the smooth design of teaching activities, and how to learn buoyancy and explore objects. To better understand the floating and sinking of objects when floating and sinking, interspersed with the educational concept of STEAM.

Keywords: STEAM Teaching Philosophy; Junior High School Physics; Curriculum Activity Design; Floating and Sinking

1. Overview of STEAM Education Philosophy

Science refers to the principles of various knowledge; Technology refers to the connection and use of various equipment; Engineering refers to overall planning, such as drawing paper; Art refers to optimizing the overall structure and beautifying the appearance, Communication; Mathematics (Mathematics) refers to the measurement and calculation in the whole production process. During this process, students' thinking is constantly being restructured. The comprehensive course tests students' ability to flexibly use knowledge in different disciplines, reflecting the integration and intersection of disciplines. Students can jump from the shallow thinking of mechanically receiving knowledge, which is only used for written questions, to applying it. Knowledge, the high-level thinking of output products, from which to implement the cultivation of aesthetics and art, is an excellent exercise for students' cognition and thinking, and also meets the requirements of new era, new youth and new minds, and is conducive to the cultivation of "from 0 to 1 " creative talent.

2. "Design and production of floating sink" activity course design

2.1 Academic situation analysis

2.1.1 Student characteristics

① In terms of knowledge and skill reserves, this course is open to middle school students in the third grade of junior high school and above. Students have initially mastered the basic knowledge of buoyancy and liquid pressure, which is conducive to students' grasp of autonomy in inquiry-based course activities; middle school students in the formal operation stage have flexible and abstract thinking, strong hands-on ability, and Certain aesthetic concepts and opinions.

② In terms of spiritual quality, students have strong curiosity and thirst for knowledge. In the school teaching method that mainly focuses on traditional lectures, they will have a strong interest in experimental activities, which is conducive to the development of the course.

2.1.2 Learning Disability

- ① Restrictions on students' thinking activity by fixed thinking and functional fixation
- ② The lack of relevant courses leads to students having a blind spot in the knowledge of the basic steps and rules of the experiment

2.2 Teaching objectives

2.2.1 Knowledge and skills:

- ① Know what is a floating sink through popular science videos and teachers' demonstrations
- ② Under the guidance of teachers, be able to combine the relevant knowledge of buoyancy to explain the phenomenon principle and production principle of floating sinkers

2.2.2 Process and method:

- ① Master the basic steps of scientific inquiry through experimental inquiry and discussion
- ② Learn to use a variety of methods to solve the difficulties encountered in the experimental process, learn to use mathematical tools, computer tools, drawing tools, etc. scientifically and effectively.

2.2.3 Emotional attitude and values

- ① Through learning, exploration and experimental production, generate scientific interest, cultivate correct scientific attitude and good scientific spirit.
- ② By making and designing floats by hand, you will have a deeper understanding of beauty and have more artistic needs for physics.

2.3 Production preparation and principle of float and sink

This part belongs to the pre-class preparation and knowledge theory input stage. For experimental activity courses, from the teacher's point of view, the premise of a good class is to prepare the class including the preparation of experimental equipment. From the student's point of view, the premise of making experiments smoothly is to fully grasp the theoretical principles of the experimental objects.

Experimental equipment: plastic bottles, scissors, paper clips, straws, water, students prepare small decorations according to their own aesthetics

Principle teaching:

Introduce the teaching part, watch the video of the submarine, and guide the students to think about the principle of its floating and diving. Through the perceptual experience of life, it can be concluded that the submarine changes its position in the water by changing its own weight through water intake and drainage.

In the part of principle teaching, the teacher demonstrates the floating-sink model, reviews Pascal's law and Archimedes' principle, and asks students to discuss in groups on the reason why floating-sunk objects float up and down:

When the plastic bottle is pinched by hand, the air in the bottle is compressed. According to Pascal's law, the pressure will be transferred to the water, so some water will be "pressed" into the float and sink. According to Archimedes' principle, the drainage volume remains unchanged at this time. The weight of the float is greater than the buoyant force it is subjected to, so the float sinks.

When the hand is released, the volume of the air above the water surface in the bottle increases, and the pressure decreases, and the air in the sinker "presses" the water out. At this time, the gravity is less than the buoyancy force, and the sinker floats up.

Summary: The floating sink changes the volume of the gas inside the floating sink through the change of the external pressure, thereby changing its own weight. Since the drainage volume of the floating sink remains unchanged, the buoyancy it receives remains unchanged, and the movement of floating up and down is realized.

2.4 Design and manufacture of float and sink

A large number of education and teaching research results can show that only by relying on students' hands-on experimental practice in science education can students' thinking enthusiasm and flexibility be mobilized to the greatest extent, stimulate their motivation to think, dare to put forward conjectures, question difficulties, and cultivate creative spirit.

2.4.1 Design and make the base model

The teacher hands over the sinker model to the students for hands-on touch and experiments to form a more intuitive understanding. After the observation, a group discussion was held to discuss the design and production plan of the floating sinker. The teacher randomly selected a student as a representative to share the design of the group. The student's design at this time was basically imitated and engraved according to the teacher's floating sinker. The principle of design, so teachers need to ask and guide students when they report, to help students understand the reasons for each step.

Step 1: Cut a piece of straw (about 5~6cm), fold it in half, and clamp and fix the two adjacent straws with paper clips. (Question: How does this float increase or decrease its own weight? Answer: The mouth of the straw is downward, allowing water to enter and exit the float with the help of external pressure changes)

Step 2: Pour water into the plastic bottle until the water level reaches about 1/6 of the bottle body. (Question: Why can't it be filled too full? Answer: Too much water will cause the air volume in the bottle to change insignificantly when the plastic bottle is squeezed by hand, and it will not be possible to float up and down)

Step 3: Gently put the float into the bottle, and the part that is required to float out of the water should not exceed 0.5-0.8cm. (Question: Why is there such a requirement for the initial position of the sinker? Answer: The floater cannot stand upright if it floats too high, and submersion will make the follow-up experiment phenomenon not obvious; Question: How to control the weight of the sinker to meet the requirements? Answer: Pass Increase or decrease the number of paper clips to achieve the goal)

Teacher's guidance: Each group can design the shape of the basic model to make it more beautiful, make it more close to the living situation, and improve its applicability.

(2) think about and improve the model

Questions:

① It is difficult to control the change of air pressure by hand pinching. The position of the float and sink in the water changes too fast, and the viewing effect is weak. Is there any way to improve it?

② How to determine the critical point of sinking of the floating sinker?

Idea:

Fast position changes → hard to control changes in air pressure → how to easily control the air pressure in the bottle? On the premise of keeping the whole device airtight, a syringe is connected. The syringe has a scale and is easy to operate, which can effectively achieve the purpose. The observability of the experimental process is improved, and the critical point is easy to find.

Improvement steps: Under the guidance and help of the teacher, the students do it or observe the teacher's use of hot melt guns, drills and other tools. Drill a small hole in the bottle cap, insert an elastic hose, connect the other end to the syringe head, and use a hot melt gun to ensure its tightness.

3. The embodiment of STEAM education concept in the design and production of Fushenzi

3.1 Implementation 300

For the creative and experimental class of making floats and sinkers, when learning science (S) and mathematics (M), the development and application of theoretical knowledge come from the pre-knowledge construction. Therefore, in the first half of this activity course, the teacher led the students to review buoyancy-related theorems and formulas in time to connect new and old knowledge, and used multimedia resources to help students recall past perceptual experiences.

In the actual design and hands-on link, allowing students to observe the teacher's demonstration instrument and design it by themselves requires students to carry out engineering (E) construction of the production object, have an overall grasp and

understanding, and with the guidance of the teacher, students can understand the operation steps. It is deeper and the understanding is more thorough; therefore, it is handy in the next production process. Due to the differences among students, there may be individual problems in technology (T), but as long as a certain amount of help is given, students can basically complete the task.

The recent emphasis on aesthetic education by the Ministry of Education has made art (A) an aspect that cannot be ignored in teaching work. In this class, all students can perform artistic treatment on the application of floats and sinks.

3.2 Teaching achievements and feedback 200

After the teaching activities were over, the teacher collected the students' works and tested and evaluated their float instruments. All the students' floats could go up and down in a stable and controlled manner. Some of them imitated submarines by dressing them up, and some decorated the bottle and syringe to simulate the fisherman's fishing...

In this activity course, through the various conjectures and innovations put forward by the students on the basic model of the floating sinker, we can see that the students' flexible thinking ability and rich imagination have well stimulated the creativity that middle school students at this age should have. It can make the classroom full of vitality, arouse students' interest in learning, and this effect has a certain persistence, which is beneficial to students' future study of physical science.

4. Epilogue

The general idea of this event course is to build the main line of classroom teaching: to ensure the smoothness of knowledge logic, the progress of students' cognitive rules, the smooth design of teaching activities, and the educational concept of STEAM interspersed in it. When the teaching steps are basically completed, the students' cognition of the principles and grasp of the skills can all achieve the teaching objectives. Compared with the traditional teaching mode and method, the classroom running through the STEAM teaching concept can obviously better fulfill the teaching requirements of this part.

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Practice and Exploration of Mental Health Education for College Students from the Perspective of Positive Psychology

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Abstract: The application of positive psychology in the work of mental health education in colleges and universities can help students better face setbacks, enable students to face learning and life with a positive attitude, and promote students' future development and promote students' healthy growth. Based on positive psychology, this paper analyzes and discusses its practice and exploration in college students' mental health education.

Keywords: Positive Psychology; University Student; Mental Health Education

Introduction

The application of positive psychology in college students' mental health education can not only innovate and optimize college mental health education, but also strengthen attention to students' daily learning activities, daily life, and future growth, and discover the negative emotions generated by students in these processes. For example, in the face of greater study pressure and anxiety generated by employment pressure, etc., prevent and solve these problems, change the lack of formal and simplistic mental health education, and enable students to establish a positive and healthy attitude.

1. The current situation of mental health education in colleges and universities in the new era

1.1 Single forms of mental health education

At present, the mental health education of college students is mainly carried out through educational evaluation and the point system. The point system analyzes students' mental health, attendance rate in professional courses and academic performance, and provides assistance for the implementation of this education. Generally speaking, this method is more suitable for cultivating professional talents, and it is not ideal for improving the mental health of college students. Educational evaluation is mainly to monitor college students' behavioral habits or questionnaires and other measures, grasp students' mental health, and formulate targeted psychoeducation plans. Although this method is helpful, it has little effect for students with more serious psychological problems. These two measures are not highly applicable to college students' mental health education in the current era, and risk control is also difficult. In this regard, colleges and universities should take the initiative to apply positive psychology to innovate the mental health education of college students.

1.2 Mental health education interventions lack timeliness

Mental health education is very important, and once delayed, it will lead to further expansion of students' psychological problems. In this regard, colleges and universities should carry out mental health education interventions in a timely manner to help them effectively solve psychological problems. However, in the current stage of mental health education in colleges and universities, it lacks the timeliness of intervention, and there are some detailed deficiencies. For example, the mental health intervention of some colleges and universities mainly focuses on remediation after the occurrence of the incident, and there is no corresponding early warning prompt and emergency treatment plan, resulting in the work not being able to play its original value. In addition, some colleges and

universities do not pay much attention to mental health intervention, and the work is too formal, and there is no in-depth study and analysis of the problem. For example, some college students have experienced depression and anxiety due to the burden of work and study. However, mental health intervention in colleges and universities is more about providing psychological counseling, and there is no long-term education mechanism and plan.

2. Teaching Practice Strategies of College Mental Health Education from the Perspective of Positive Psychology

2.1 Accelerate the educational innovation of positive psychology in colleges and universities

Mental health education based on positive psychology needs to be further innovated. In detail, positive psychology education and teaching will be used as a medium, and it will be integrated into mental health education in different ways and angles, and at the same time some of the concepts in psychology will be applied to build a sound mental health education mechanism and system, so as to promote colleges and universities to face up to and attach importance to college students' mental health problems, and then improve their ability to deal with students' mental health problems. First of all, the innovation of positive psychology in colleges and universities should be further strengthened. Colleges and universities should enhance the interaction between teachers and students, so that teachers can grasp the dynamic thoughts and psychological conditions of students, and provide assistance for teachers to effectively formulate solution plans. Second, reasonable means should be used to make the forms of mental health education more diversified and give full play to the value of positive psychology. The application of positive psychology should not follow the traditional educational evaluation, but should be reflected in all aspects of college students, so that college students can fully contact positive content, and then ensure their excellent and healthy learning attitude ^[1]. Finally, the analysis of mental health education for college students should be strengthened. In detail, teachers analyze the mental health of college students based on non-private information such as students' life behavior characteristics, performance and attitude in learning, daily behavior habits and social direction, and build mental health models for college students through information and dataization, so that colleges and universities can judge the impact of various external factors on college students' mental health through environmental simulation, and then compile effective solutions with the help of positive psychology to enhance the guiding role of positive psychology.

2.2 Establish educational intervention evaluation mechanisms based on positive psychology in colleges and universities

Taking positive psychology as a foothold, building a mental health education intervention evaluation system for all college students is of great help to improve its timeliness and timeliness. The educational intervention and evaluation mechanism refers to the establishment of a relatively sound early warning system based on various psychological problems that may arise from students at different stages, and to do a good job of guiding college students before they have this problem, so as to help students enhance their mental health and construction, so that they can face life and learning happily and positively. In order to implement the construction of the intervention early warning mechanism, colleges and universities should be guided by the potential and existing psychological problems of college students, formulate more than two psychological intervention emergency strategies, help college students solve psychological problems, and free themselves from quagmire and dullness. In addition, the educational intervention evaluation mechanism based on positive psychology should also take long-term mental health education as the starting point, do a good job in educational layout, and must ensure that the education is not a phased intervention, but can help college students for a lifetime. In this regard, colleges and universities should take students' employment direction, learning situation, family background and environment as the starting point, conduct comprehensive mental health education assessment, analyze students' potential psychological problems, and then scientifically apply positive psychology concepts and methods to improve the mental health level of college students ^[2].

2.3 Strengthen online education and counseling on positive psychology

Through online course teaching, strengthen online education and guidance on positive psychology, improve students' learning level of online classes, and make online classes a petition room for teacher-student communication, so as to provide assistance for the

implementation of positive psychology education. Colleges and universities should further strengthen the development of online positive psychology resources, build online learning and interactive platforms, enhance teacher-student interaction, expand the teaching channels of positive psychology, and become leaders in online college students' mental health education in the new era. In addition, teachers can also communicate and interact with students through Internet socialization, understand and master students' psychological problems at this stage, and change the boring teaching methods in the past. For example, colleges and universities can implement online mental health education through the interaction of multiple professional disciplines, and form educational synergy through the linkage of teachers of different professional courses, so as to improve the effectiveness of the application of positive psychology in college students' mental health education.

2.4 Actively carry out offline practical activities based on positive psychology

The fundamental goal of carrying out positive psychology online practice activities is to develop the interests of college students, improve the acceptability and interest of mental health education, integrate the content that college students are curious and want to explore into mental health education, and make interest the guardian line of college students' mental health. For example, colleges and universities can use travel, e-sports, animation, and various DIY as the guiding content of online activities, and by understanding students' preferences and characteristics, formulating competition activities, and then enhancing the fun and richness of practice, so that students can get rid of boring learning and actively face life and learning. In addition, when carrying out relevant activities, students' feelings and emotional experiences in such activities should be well considered, and the guiding value of positive psychology should be enhanced by enhancing the pleasure and satisfaction of college students participating in activities, so that positive psychology can become an important guide and medium for contemporary college students' mental health education, correct their wrong cognition of psychology courses, form a healthy and positive attitude to learning and life, get rid of the disturbances of trivial matters, and help college students become active and healthy, love life and learning in the new era and new youth.

Conclusion

College students' mental health education from the perspective of positive psychology should be analyzed based on its characteristics, and scientific planning and layout should be implemented. Give full play to the value and advantages of positive psychology education, so that it can start from different angles and different contents, comprehensively protect the mental health of college students, and lay a solid foundation for the effective development of college students' mental health education.

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Problems and Improvement Measures in College Japanese Teaching —— Taking Guizhou University of Commerce as an Example

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Abstract: Taking Guizhou University of Commerce as an example, the author pointed out the problems in current Japanese language teaching in universities and proposed improvement measures from three aspects, aiming to explore a suitable path for Japanese language teaching in commerce colleges.

Keywords: College Japanese; Teaching; Problem; Measure

1. Overview of College Japanese Curriculum

Among various universities in China, the offering of Japanese language courses in universities has begun to take shape. However, due to the large number of universities in China, influenced by factors such as geography and faculty strength, the teaching mode of this course exhibits a regional and diversified characteristics. In particular, the newly established undergraduate colleges have not yet formed a guiding unified model in terms of curriculum design due to their short running time, lack of experience and other factors, and the quality of college Japanese teaching needs to be improved.

2. The Current Situation of Japanese Language Teaching in Guizhou University of Business

The Japanese language course at Guizhou University of Commerce is a compulsory course for general education (parallel to college English), and is one of the compulsory foreign languages for all majors in the school. The college Japanese course started in 2019 and runs through the first and second semesters. The course is aimed at undergraduate students from various majors in the college, and the foreign language used in the college entrance examination is Japanese. In universities, university day courses have been selected to replace college English courses. The advantage of this group of students is that they have accumulated a certain foundation in Japanese during their high school years. They already have a certain level of basic Japanese knowledge and have mastered a certain knowledge system of Japanese vocabulary, grammar, and other aspects. The deficiency lies in the uneven level of students and the phenomenon of two-level differentiation; The number of students is small, making it difficult to carry out graded teaching, and implementing a mixed class teaching system throughout the school; The vast majority of students are still in the most basic stage of proficiency; Difficulty in listening and speaking, unable to use Japanese for basic daily communication.

3. Problems in Japanese Language Teaching at Guizhou University of Commerce

3.1 Fewer course resources

Compared to college English course resources, the resources for Japanese language courses in universities are much less, such as textbooks, audio-visual and oral materials, teaching aids for CJT-4, MOOCs, etc. This is not only a problem faced by Japanese language teaching at Guizhou University of Commerce, but also the same problem faced by the entire university. Although the number of Japanese students in the college entrance examination has grown rapidly in recent years, and the research and development of university Japanese textbooks and the distribution of various materials have increased, overall resources are relatively scarce, with

most textbooks being outdated and lacking corresponding exercise question banks. Especially for the College Japanese Test Band 4 and Band 6, there is a lack of resources, and it is difficult to find corresponding tutoring and practice materials besides past exam questions.

3.2 The teaching mode, methods, and means of teachers are single and outdated

The teaching of Japanese in universities adopts a relatively traditional teaching mode, mainly based on simple lectures. The teaching order is generally based on the traditional vocabulary, grammar, text, and after class exercises, which lacks innovation. Considering the uneven foundation level of students and the lack of implementation of graded teaching, classroom teaching is generally taught by teachers, and students practice this teaching method of "teaching method+practice method". Due to the poor foundation of some students and the emphasis placed on grammar teaching by teachers, students find it boring and lack interest in learning. Although classroom teaching may also use multimedia and other teaching equipment, some new teaching platforms have lower usage rates compared to new teaching platforms such as Xuetong and YuClassroom. Therefore, teaching is limited to classroom teaching and it is difficult to extend modern teaching methods beyond classroom teaching.

3.3 The ideological and political education of the curriculum needs further improvement

Firstly, as a university Japanese language teacher, the concept of "ideological and political education in the curriculum" needs to be further strengthened. At present, Japanese language teachers in universities unilaterally believe that ideological and political work is the responsibility of ideological and political course teachers, and their own task is language teaching. As a foreign language teacher, I am not aware of the nature of humanistic literacy courses in university Japanese courses, and only value the cultivation of language ability, neglecting its goal of cultivating morality and cultivating talents. Secondly, there is insufficient research on ideological and political education in the curriculum, and insufficient exploration of the ideological and political elements contained in the textbooks. Regarding the current preparation of Japanese courses in universities, only the content of ideological and political courses specifically listed in the lesson plan has not been established, and there is a lack of complete and detailed curriculum design for ideological and political courses. Thirdly, the course of ideological and political education has not been extended. Although teachers have also incorporated ideological and political elements into their teaching, they are only limited to classroom teaching. And ideological and political education in the curriculum should not be limited to the classroom, but should also be extended to pre class and post class, only in this way can we better achieve the goal of cultivating morality and talent.

4.Measures for Improving Japanese Language Teaching in Guizhou University of Commerce

4.1 Integrating Teaching Content and Resources to Integrate CJT-4 and CJT-6 into Classroom Teaching

As a compulsory course in general education, college Japanese should meet the personalized needs of students at different levels and majors, and achieve a comprehensive integration of professional courses and basic knowledge, rather than just traditional language teaching. As a university Japanese language teacher, we should combine teaching with practice, innovate the content of university Japanese language teaching, and deepen the teaching connotation. At the same time, actively utilize online teaching resources, actively draw on and learn from the high-quality course resources of famous teachers from famous universities, such as the Chinese University MOOC Online Learning Platform and the Japanese version of People's Daily Online; Explore and collect teaching materials, teaching cases, teaching videos, and other university Japanese course learning resources. In accordance with the new business teaching requirements of Guizhou Business College, we aim to cultivate talents, combine students' professional directions, select excellent content, and enrich teaching resources. At the same time, in accordance with the needs of students in the College Japanese Test Band 4 and Band 6, this part of the content should be organically integrated into classroom teaching. By setting teaching objectives in the teaching syllabus, incorporating teaching content into lesson plans, integrating teaching content with test points, arranging after-school check-in, participating in after-school tests, and a series of methods and means to implement.

4.2 Guided by Chinese culture, further improving ideological and political education in the curriculum

Teachers should take "telling Chinese stories well and spreading Chinese culture" as the value guide, and fully explore Chinese cultural elements from teaching materials to enhance students' sense of identification and confidence in Chinese culture. For example, in this lesson, we will learn the honorific language in Japanese, using "honorific language" as a learning material to draw inspiration. Students will be invited to compare the cultural differences and similarities between Chinese and Japanese honorific languages, and also engage in group cooperative learning. Group discussions will be conducted to discuss the significant impact of Chinese Confucian culture on the formation of Japanese honorific language, thus leading to the introduction of ideological and political education in the course. It is also possible to gain a deeper understanding of Chinese culture and stimulate reflection through a comparison between China and Japan. For example, when teaching the course 'University Life', students can explore the differences between college students and campus life in China and Japan by consulting materials, watching videos, and reading cultural columns before class, thereby helping students establish correct life views and values, and spend a meaningful university life.

4.3 Reform teaching mode and innovate assessment methods

Adopting an "online+offline" teaching model, using task driven teaching methods as a means to encourage students to complete teaching through self-directed learning. Teachers collect teaching resources from various online platforms, upload videos and PPT through Learning Pass, set task points and deadlines, and enable students to complete relevant knowledge points online. In addition, make full use of online teaching functions such as homework assignment, topic discussion, and testing to meet students' learning needs, test the effectiveness of students' online learning, and stimulate students' awareness of self-directed learning.

The assessment method of college Japanese has also been appropriately adjusted, and the final exam course evaluation adopts a combination of formative assessment and summative assessment: the process assessment score accounts for 40% of the total semester evaluation score, and the summative assessment score accounts for 60% of the total semester evaluation score. This assessment method can comprehensively and timely track students' learning situation, run through the entire learning process, and better stimulate students' learning motivation.

5. Conclusion

In summary, the author takes Guizhou University of Commerce as an example to summarize the problems in Japanese language teaching in universities and propose corresponding improvement measures. The author will continue to summarize and improve in future teaching, and find a suitable path for Japanese language teaching in commerce colleges.

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Association between Anxiety and Learning Adaptability in Post-epidemic College Students: The Role of Self-Management

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Abstract: Even in the late stages of the COVID-19, the physical and psychological trauma caused by the epidemic continues to affect people, particularly university students, whose physical and psychological health is vulnerable to environmental influences. The purpose of this article is to investigate the relationship between learning adaptability and “state” anxiety among university students enrolled during the COVID-19(2020-2022), as well as the role of self-management in mediating this process. The findings reveal a negative association between college students' academic adjustment and their state anxiety, a process that also includes a mediation role for self-management, with subjects in this research being college students enrolled during COVID-19. This study offers a theoretical foundation for investigating the factors influencing anxiety from an operationalized viewpoint, as well as for further effective regulation of university students' mental health and anxiety reduction.

Keywords: Anxiety; Learning Adaptability; COVID-19

1. Introduction

Since the beginning of the COVID-19 in 2020, people's lifestyles and habits have been greatly affected. Public management measures taken in reaction to outbreaks in nations like China can occasionally have a negative impact on people's physical and emotional health, despite their best intentions^[1]. The effects of COVID-19 persisted after it ended, posing a hazard to the public's mental health and safety—a risk that most people have chosen to overlook^[2]. Among every population, university students are more sensitive to their surroundings and more vulnerable to numerous negative stimuli, resulting in despair, anxiety, and other feelings^[3].

But how can we effectively reduce anxiety among university students, particularly in light of the persistent effects of the epidemic? In this study, the following hypotheses are offered to analyze the internal logic of the formation of state anxiety in university students and its relationship with their academic performance:

H1: Self-management and learning adaptation are related;

H2: The moderating role of anxiety between self-management and learning adaptation.

2. Literature Review

2.1 Anxiety

Anxiety is a negative emotion characterised by somatic symptoms of physical tension and worry about the future, such as persistent worry, fear and panic^[4]. As a common psychological disorder, anxiety was divided into two categories: “Trait” anxiety and “state” anxiety^[5]. “Trait” anxiety is temporary, triggered by a sudden stressful stimulus or event. An intrinsic propensity to feel nervous, or an unconscious emotional state that happens in response to unexpected stimuli, is referred to as “state” anxiety.

In conclusion, current research has emphasized the connection between anxiety and personality, highlighting that it is tied to a person's character traits and tendencies, a kind of explanation that, from a practical standpoint, inhibits people from changing their anxious state.

2.2 Learning adaptability

The process by which people attempt to modify their psychological and behavioral selves to achieve harmony with the learning environment in accordance with needs of the environment and learning, is known as learning adaptability^[6].

Previous studies focused on the relationship between academic flexibility and student academic achievement, as well as the impact on an individual's performance in society. However, current researches don't really address the positive psychological functions of learning adaptation in a post-epidemic context.

2.3 Self-management

According to Agolla^[7] self-management is the ability to work toward long-term goals while remaining adaptable and efficient in the face of challenges. The degree of self-management is frequently assessed in connection to both academic performance and personal feelings. Since it has been shown that self-management is a crucial learning skill, this research will look at the mediating function that self-management plays between anxiety and learning adjustment. Little studies have been done on the impact of self-management on negative emotions like anxiety.

3. Research methods

3.1 Subjects

By referring to similar studies on mediating variables, the proposed number of subjects was determined to be 300. For this study, 300 university students will be chosen randomly, those who will be enrolled in 2020–2022. Because they began their studies at the same time as the COVID-19 epidemic, they had to deal with hitherto unheard-of difficulties in adapting to university life.

3.2 Measurement

The Self-Management Assessment Scale(SMASc) was developed by Öberg^[8], and Al-Abyadh^[9] improved its applicability to students' everyday lives. It has a Likert scale with 10 items and a six-point scale. The adapted SMASc can be used as a valid tool to measure the self-management ability of college students with a Cronbach alpha coefficient of 0.901.

The Learning Adaptability Measure for College Students, created by Feng and others^[6] and consisting of 29 questions, was used in this study. The higher the scale score, the better the learning adaptability. With a Cronbach's alpha coefficient of 0.948.

In this study, respondents' anxiety throughout the previous week were evaluated using the anxiety self-assessment questionnaire, which Zung^[10] established. Higher scores indicated that the person was more anxious. The scale's dependability was high, with a Cronbach coefficient of 0.92.

4. Results

4.1 Common method bias testing

The Harman one-way test was employed to avoid common procedure bias from compromising the accuracy of this study's conclusions(the first common component was 30.95%).

4.2 Descriptive statistics

The results of the descriptive statistics are shown in Table 1, where the mean anxiety level of university students was high and there were some differences in learning adaptation and self-management skills.

Table 1

	Max	Min	$M \pm SD$
Anxiety	71	20	35.40±10.71
Learning adaptability	145	37	107.70±19.12

Self-management	50	18	39.76±5.96
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Independent sample t-tests were conducted on the three variables to examine the differences between males and females, and the results are shown in Table 2, which revealed that males were higher than females in anxiety levels, higher than females in self-management levels, and no differences existed in academic adjustment skills.

Table 2

	Male(<i>n</i> = 119)	Female(<i>n</i> = 173)	<i>t</i>
Anxiety	37.81(12.38)	33.74(9.06)	-3.25**
Learning adaptability	106.57(21.93)	108.48(16.94)	0.84
Self-management	40.60(5.88)	39.19(5.96)	-2.00*

4.3 Correlation coefficients of variables

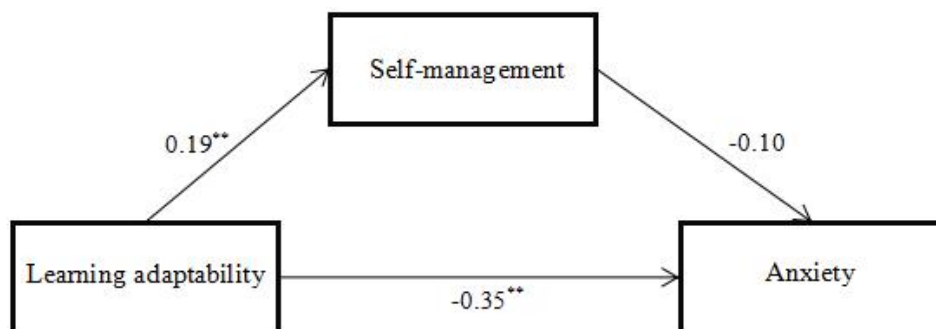
The correlation between the subjects' learning resilience and anxiety levels was tested using Pearson's correlation coefficient, and a significant negative correlation was found between them($r = -0.66, p < 0.01$).

4.4 The research structural model and hypotheses testing

As shown in Figure 1, the coefficient between learning adaptability and anxiety is significant, the coefficient between learning adaptability and self-management is significant, and the coefficient between self-management and self-management is not significant after self-management is included in the model, indicating that self-management plays a completely mediating role in it.

Figure 1

Hypothetical Model



5. Discussion

This study first verified the relationship between university students' anxiety levels and their academic resilience in the post-epidemic period, which is in line with previous findings. Stockinger et al^[11] found a negative correlation between college students' adaptability and anxiety and despair; Academic performance and strong academic performance are closely associated, and good academic achievement can increase students' self-efficacy and reduce their dread of the future.

This study's findings show how self-management has a significant mediating effect in university students' anxiety and learning adaption. The study's findings indicate that in order to improve students' academic performance and psychological well-being, particularly for university students in the post-epidemic period, where the develop systems that foster students' ability to cope with unsatisfactory studies, manage free time, adjust physically, adapt to new living environments, and maintain interpersonal relationships.

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Development of Local Foreign Affairs Management Departments in the Context of Administrative System Reform --Taking the Foreign Affairs Office of Shaanxi Province as an Example

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Abstract: Since the reform and opening up, China has continuously pushed forward the administrative system reform, adapted to the national conditions and the requirements of the times, and achieved fruitful results. Generally speaking, the successive administrative system reforms have focused on the government and the adjustment of the dynamic relationship between government-market-society. Due to the special characteristics of local foreign affairs departments in the administrative system, the successive reforms have provided less guidance to them, and related research is also relatively lacking. However, from a practical point of view, local foreign affairs offices have long followed the pace of administrative system reform and carried out a series of adjustments and optimizations. As an important element of administrative system reform, the functional transformation of local foreign affairs offices has been continuously promoted along with institutional reform. This research, which is mainly based on talks and supplemented by document comparisons, aims to study the development results and experiences of the Foreign Affairs Office of Shaanxi Province in the context of administrative system reform, and tries to provide a case study for the administrative system reform of local foreign affairs departments.

Keywords: Administrative System Reform; Government Function Transformation; Foreign Affairs Management; Local Foreign Affairs Office

1. Administrative System Reform

1.1 Overview of the history of administrative system reform in China

Since the reform and opening up, China has carried out eight administrative system reforms in order to adapt to the trends and requirements of economic and social development and to promote socialist modernization. The first four reforms focused on decentralization and devolution of power, mainly adjusting the government's economic functions and eliminating institutional and procedural factors that constrained economic development.

The first reform, which began in 1982, focused on institutions and personnel, laying the organizational and personnel foundation for shifting the focus of the Party and the country from "class struggle" to "socialist modernization"; the 1988 reform focused on the restructuring of economic power, giving enterprises autonomy to break through the "class struggle". The 1988 reforms focused on the restructuring of economic power, giving enterprises autonomy to break away from the planned economic system and the "all-powerful government" mentality. In the two administrative reforms that began in 1993 and 1998, respectively, China's administrative reforms were adapted to the socialist market economic system, and the separation of government and enterprises was realized to a great extent through the decentralization of economic power and the abolition of industrial economic departments.

It is worth noting that in the 1988 reform, the idea of "transforming government functions is the key to institutional reform" was first proposed, and in the 1993 reform, the idea of integrating party and government institutions was first put forward. These two ideas have continued to this day and have grown in importance, influencing the reform of the administrative system at all levels and in all

sectors, and playing a particularly important guiding role in the development of the Shaanxi Foreign Affairs Office in this study.

The latter four reforms focused on the development and fulfillment of the government's due responsibilities and functions, and began to develop the government's social management and public service functions in addition to its service economy functions. The 2003 reforms improved the government's market regulation functions, while the government's emphasis on the fulfillment of its social management and public service functions gradually increased after the outbreak of SARS; the 2008 reforms, which focused on the social management and public service departments, The 2008 reform focused on social management and public service sectors, emphasized the concept of building a service-oriented government, and put forward the idea of reforming the large ministry system.

In 2013, the reform further prioritized the transformation of government functions, and continued to promote the construction of a service-oriented government and reform of the major ministry system with clearer objectives, and formally summarized the idea of "release, management, and service" reform in the State Council's 2015 TV and telephone conference on the work of simplification, decentralization, and combination of function transformation. In 2018, China's administrative system reform entered a new era of promoting the modernization of the national governance system and governance capacity, and systematically solved the problems of responsibility gaps, fragmentation, lack of power, intersection and overlap through the adjustment of institutions and functions. In addition, this reform focuses on depth and quality; in addition to developing its governance system, China is also focusing on modernizing the way it governs, and on optimizing its functions in addition to transforming them.

It is worth noting that in the reform that began in 2003, China began to focus on the reform of the administrative approval system, and after the 18th CPC National Congress, the 2013 reform emphasized the simplification and decentralization of government, and continued to promote the reform of the administrative approval system, while putting forward ideas such as strengthening the supervision of the incident after the event, in addition to the three-list system and so on, which were put forward during the two sessions of the 2015 session, marking the transformation of government functions into a new stage. These changes, as well as the 2018 institutional restructuring, have had a profound impact on the development of the Foreign Affairs Office of Shaanxi Province.

In February 2023, the Second Plenary Session of the 20th Party Central Committee passed the Party and State Institutional Reform Program, and in March of the same year, the First Session of the 14th National People's Congress voted to adopt the decision on the State Council's institutional reform program, and at that moment, China entered the ninth administrative system reform. The particularity of the background of the new round of reform lies in the fact that the current situation of the century's unprecedented changes is accelerating the evolution of China's development into a period of strategic opportunities and risks and challenges coexist, and the increase in the number of uncertain and unpredictable factors, which also puts forward more new requirements for the new round of reform.

1.2 Characteristics and trends of administrative system reform in China

Throughout the course of China's administrative system reform, the following features and general trends can be summarized.

First of all, adapting to the socialist market economic system and economic development environment is always the essential requirement, and promoting economic development is always the most important purpose of administrative system reform. Successive reforms of the administrative system have been carried out within the framework of the government-market-society relationship, adjusting the division of governmental roles through institutional reforms and functional transformations, and grasping the scope of governmental authority and the boundaries of responsibility.

At the same time, the integration of party and government institutions is an issue that has been under constant consideration in the reform, and is also a trend in the current and future reform efforts. The idea of separating but integrating party and government institutions has been put forward since the administrative system reform in 1982, and has been deepened and implemented since 1993, and this principle as well as the idea has been practiced continuously since then.

In terms of the overall direction of work, the central position of the transformation of government functions has become more and more prominent, with decentralization, management and services being promoted separately and combined with each other as the main direction of reform to realize the transformation of functions. In terms of decentralization, in order to cope with the greater demand brought about by the opening up of the economy and modernization, the institutional facilitation of administrative approval and other functions should also be the direction of continuous improvement in the future. In terms of combining decentralization with

management, from the object of management to the way of management, all will be aspects that will be continuously adjusted and optimized in the reform process. The construction of a service-oriented government, on the other hand, is the core of the transformation of government functions. On the basis of a clear overall construction goal, government agencies at all levels and in all sectors will continue to optimize their services according to their own sectoral characteristics and by giving full play to their sectoral features.

In terms of the direction of future macro changes, transforming "institutional advantages into governance effectiveness" will be an important proposition. 2018 enters a new era, proposing to promote the modernization of the national governance system and governance capacity, emphasizing the direction of governance-oriented reform. To promote the modernization of the governance system and governance capacity, we should be based on the real needs, pay attention to and mobilize multiple governance subjects, coordinate the "relationship" and "knowledge" of all levels, functions, public and private sectors, and use modern information technology and other means to enhance governance capacity. This means that China's administrative reform will not only focus on functional transformation, but also on the optimization of responsibilities, and promote the departments and their resources from dispersion to integration, and from parts to the whole.

2. Shaanxi Province

In recent years, the Foreign Affairs Office of Shaanxi Province has experienced two important institutional adjustments. After the institutional adjustments, the status of the Foreign Affairs Office has been improved, and the Party's leadership of foreign affairs work has also been strengthened in terms of institutional settings.

2.1 First Adjustment: From an Organization Directly Under the Government to a Component Department of the Government

In the process of institutional reform, the State Council approved two Functional Transformation and Institutional Reform Programs of the People's Government of Shaanxi Province in 2000 and 2014 respectively. Accordingly, the Shaanxi Provincial Government officially issued two "Shaanxi Provincial People's Government Foreign Affairs Office (Provincial Overseas Chinese Affairs Office) Functional Configuration of Internal Organizations and Staffing Regulations".

In 2000, the Provisions clearly stated that "the Foreign Affairs Office of the Provincial People's Government (Provincial Overseas Chinese Affairs Office) is the directly subordinate administrative organization of the provincial government in charge of the province's foreign affairs and overseas Chinese affairs" ^[1]. In the 2014 Provisions, the relevant expression is "the establishment of the Provincial Foreign Affairs Office, as a constituent department of the provincial government" ^[2], marking the provincial Foreign Affairs Office formally transformed from an organization directly under the government into a government department, increasing the authority of the department and the importance of the overall work.

In fact, as early as 2007, the General Office of the Provincial Government had already issued a notice on the adjustment of the Provincial Foreign Affairs Office from an organization directly under the government to a constituent department ^[3]. The Regulations issued in 2014 formalized it and clearly elaborated the functions of the Provincial Foreign Affairs Office as a constituent department of the government, canceled the management responsibilities for Hong Kong, Macao and Chinese-funded institutions in Shaanxi Province and the certification of overseas Chinese-funded and overseas Chinese-funded enterprises, and transferred the responsibilities for the approval of the settlement of overseas Chinese in Shaanxi Province from the Provincial Public Security Department to the Provincial Foreign Affairs Office. The reform raised the status and importance of foreign affairs work in government work, while continuing to change functions, reduce the Foreign Affairs Office in the economic aspects of the management and approval functions, and give fuller play to the Foreign Affairs Office as a government department of foreign affairs management functions.

2.2 Second adjustment: listing the Office of the Foreign Affairs Working Committee of the CPC Shaanxi Provincial Committee

On February 28, 2018, the Decision of the CPC Central Committee on Deepening the Reform of Party and State Institutions, adopted by the Third Plenary Session of the 19th CPC Central Committee, proposed that "the relevant Party institutions can be set up in a coordinated manner with other departments that have similar functions and are closely linked, and be merged and set up or

co-located, so as to integrate and optimize their strengths and resources, and to give play to their comprehensive benefits "[4].

Under the guidance of this line of thinking, Shaanxi Province, in accordance with the unified deployment of the provincial party committee to form the CPC Shaanxi Provincial Committee Foreign Affairs Working Committee Office, the province's foreign affairs work is assigned to this provincial institution, while retaining the brand of the Foreign Affairs Office of the provincial government. This institutional reform puts the integration of party and government departments into local foreign affairs management departments. At present, only eight provincial and municipal foreign affairs offices have been transferred to the provincial party committees in the national institutional reform, and Shaanxi Province, as one of them, has taken the lead in starting the exploration and accumulation of experience in practice.

On the one hand, the integration of party and government organizations has given the corresponding organizations the impetus to change their functions in terms of mechanism and power. In the process of transferring the Foreign Affairs Office of Shaanxi Province to the provincial party committee, it has realized the change of its own positioning and the transformation of its functions, and at the same time put forward stricter requirements for its own work, bursting out with new vitality. On the other hand, party and government integration has strengthened the Party's leadership in local foreign affairs management. The advantage of realizing the direct unified leadership of the Party through institutional reform instead of incorporating the Party's leadership into the work links through the design of procedures is that it avoids the possible addition of procedures and links, ensures the simplification and decentralization of government, and moreover realizes the goal of preventing overlapping of institutions, duplication of functions, and overlapping of work through the consolidation of institutions, and realizes the integration of strengths and resources and the realization of comprehensive benefits.

3. Functional Transformation and Optimization of the Work of Shaanxi Foreign Affairs Office

Since the institutional reform, the Provincial Foreign Affairs Office has assumed the role of centralized management, leadership and supervision of the province's foreign affairs work, and has gained more autonomy in carrying out diplomatic and foreign affairs activities and serving the country's overall diplomacy. In terms of optimization of functions and duties, the Provincial Foreign Affairs Office's grasp of its own functions and duties as well as the corresponding transparent work have shown the characteristics of clarity and refinement. In terms of concrete actions of functional transformation, the Foreign Affairs Office has grasped the spirit of the central documents and explored independently to realize decentralization, combination of administration and optimization of services, and has formed some experiences with local characteristics.

3.1 Positioning and Task Transformation

In the process of the provincial foreign affairs office participating in the administrative system reform, the most notable change is shown in its grasp of its own positioning and characters. Traditionally, the work of local foreign affairs offices is mainly to undertake the tasks of the central government, to undertake, co-organize and serve foreign affairs activities, and to cooperate with various departments to carry out foreign affairs work. In recent years, with the increase in the importance of foreign affairs work and the institutional reforms coordinated by the Party and the government, the powers and functions of the foreign affairs offices have also changed significantly. At present, the provincial foreign affairs office still retains its functions as a government agency, and retains its traditional role as a participant and behind-the-scenes servicer of foreign affairs activities, but it has gradually assumed the function of coordinating and guiding the foreign affairs work of the whole province, and has gained the power and initiative to host foreign affairs activities and develop parallel diplomacy on its own.

3.1.1 Positioning change: from participation and assistance to coordination and leadership

In terms of functions, the Shaanxi Foreign Affairs Portal has added the expression "coordinating and arranging the foreign affairs activities of provincial leaders"[5]; changed from "responsible for the training of the province's foreign affairs cadres and foreign-related personnel"[2] to "responsible for guiding the province's foreign affairs cadres and foreign-related personnel"[3]. Training of the province's foreign affairs cadres and foreign-related personnel" [5], it can be seen that the Foreign Affairs Office has begun to do

more to coordinate and guide, rather than just docking and guarantee.

Fundamentally, the essence of this shift is the change of the Foreign Affairs Office's positioning of itself. The positioning of the role of the Foreign Affairs Office of Shaanxi Province as the leader of the province's foreign affairs work is mainly reflected in two aspects, namely, the coordination and harmonization of the province's foreign affairs information resources and the leadership and supervision of the province's foreign affairs management business functions. In terms of information resources coordination, in recent years, the Foreign Affairs Office is responsible for summarizing, organizing and transmitting economic and trade as well as other foreign affairs information for the reference of provincial leaders and various departments, and for studying the opening-up and cooperation with the outside world. It is worth noting that in recent years, the Provincial Foreign Affairs Office has established a liaison mechanism for the resources of friendly cities, set up a relevant website, formed a platform for summarizing the information on the resources of friendly cities, and the cities and relevant departments and bureaus as member units for information resource sharing.

In addition, the Provincial Foreign Affairs Office holds annual meetings with the directors of local municipal foreign affairs offices, etc., aiming at promoting information and resource sharing among municipalities and realizing the development of the coordinated functions of the Provincial Foreign Affairs Office. The provincial foreign affairs office also focuses on the integrated use of resources of cities and regions in the process of foreign affairs reception, developing routes for group visits and organizing large-scale activities, giving full play to the characteristics of cities and regions, and inviting the relevant departments and bureaus to collaborate in the promotion of foreign affairs activities. The initiatives taken by the Foreign Affairs Office of Shaanxi Province in resource integration are worth learning from as a rare practical experience in other places.

In terms of coordinated guidance on operations and functions, since the institutional reform of the Foreign Affairs Office, relying on the working mechanism of the Foreign Affairs Working Committee of the Provincial Party Committee, it has established a mechanism for researching, semi-annually supervising, and province-wide supervising the province's foreign affairs, realizing its role of leading and supervising the province's foreign affairs staff in terms of their operations and functions.²⁰²³ In January, in accordance with the Circular of the General Office of the State Council on the Comprehensive Implementation of the Management of the List of Administrative Licensing Matters, the Provincial Foreign Affairs Office also prepared and issued the List of Foreign-Related Administrative License Matters in Shaanxi Province^[6] and made it public on the web portal. This list summarizes and organizes the dispersed foreign-related administrative permit approval matters of provincial departments in the List of Administrative Permit Matters of Shaanxi Province issued by Shaanxi Province for the reference of the personnel of the Foreign Affairs Management Office of each department in the province and for the supervision of the society. This system enhances the transparency and accuracy of administrative approval information disclosure, while providing institutional support for the orderly opening up to the outside world.

3.1.2 Grasp the main tasks: serving the overall national diplomacy and local social development

At the macro level, in addition to focusing on the benefits of economic development, the reform of the administrative system also pays more and more attention to the social benefits and the comprehensive interests of the country. The special nature of provincial foreign affairs departments means that the task of serving the overall diplomatic needs of the country will occupy a greater proportion in the process of its future functional transformation. In recent years, the provincial foreign affairs office has noticed that in the process of designing foreign affairs activities and carrying out foreign cooperation, municipalities, departments, and civil society entities are prone to pay attention only to economic and social benefits, and pay less attention to serving the country's overall diplomacy. In order to strengthen the awareness of cities and municipalities to serve the country's overall diplomacy in the process of foreign exchange, the Shaanxi Foreign Affairs Office is studying the establishment of a comprehensive index system for open development, which includes the number of foreign students, the introduction of foreign capital, investment and exports as the index assessment content. This work also demonstrates the increasing leadership and supervisory functions of the provincial foreign affairs office.

As for the participation and leadership of the provincial foreign affairs office in diplomatic and foreign affairs activities, after years of practice, the Shaanxi Foreign Affairs Office and its subordinate institution, the Provincial Friendship Association, have accumulated rich experience in the field of urban diplomacy; the goal of constructing a highland for inland reform and opening-up provides impetus for the Shaanxi Foreign Affairs Office to carry out openness to the outside world; and the reform of the

administrative system has further empowered the office with the right to take initiative in carrying out urban diplomacy and the space for it to play its role.

In recent years, in addition to doing a good job in serving the overall national diplomacy and local social and economic development of the "two services", the provincial foreign affairs office to promote the construction of the Belt and Road, and promote the construction of a community of human destiny as a major goal. With the help of three major events, namely the Silk Road Expo, Eurasian Economic Forum and Agricultural Trade Fair, the Foreign Affairs Office has created a platform for foreign exchange in Shaanxi Province. At the level of civil diplomacy, the provincial Foreign Affairs Office helps promote the Silk Road International Art Festival, Silk Road International Tourism and Travel Association, Silk Road International Film Festival and other ancillary activities to strengthen humanistic exchanges with countries along the "Belt and Road". In addition, the provincial Foreign Affairs Office is planning to hold a seminar on civil diplomacy in the second half of 2023, in an attempt to integrate knowledge resources and departmental functions in various fields of diplomacy, and to form a synergy to study the development of civil diplomacy programs together.

In the aforementioned activities, the Provincial Foreign Affairs Office coordinated the planning and invited the participation of various departments to strengthen the guidance of foreign affairs work. In addition, the activities promoted by the Foreign Affairs Office include the Provincial Foreign Affairs Parlor, organizing video conferences on RCEP synergistic development of regional cooperation, and so on, to promote exchanges and communications among international enterprises. Utilizing the resources of Friendship Cities, the Foreign Affairs Office organizes local government cooperation forums to develop regional industrial cooperation with foreign countries, as well as promotes the Belt and Road and the China-Europa-Bahn Train projects, designs the routes of delegations, and coordinates the reception of resources in the province, so as to enhance domestic and foreign interoperability.

After the institutional reform, the provincial friendship association, as an institution directly under the Foreign Affairs Office, is responsible for coordinating the work of civil diplomacy of all civil diplomacy subjects in the province, from government departments to enterprises, colleges and universities, social organizations, etc., serving as a bridge for public diplomacy, as well as carrying out the work of concluding city diplomacy as a main body of the city of friendship, etc. Some regional offices have also targeted the development of regional industrial cooperation. Some of the regional offices also target the countries in their areas of responsibility, participate in local international organizations and international conferences, and carry out exchanges in the areas of economy and trade, humanities, education and so on. In addition, it also undertakes tasks assigned by the Ministry of Foreign Affairs and the Ministry of the People's Republic of China to conduct foreign affairs receptions and organize international activities and projects. Generally speaking, both the provincial friendship association and the provincial foreign affairs office assume the roles of coordinating the province's diplomatic and foreign affairs resources, proactively participating in and carrying out diplomatic and foreign affairs activities, and serving and participating in the country's foreign affairs activities, and the combination of the three effectively realizes the goal of "two services".

3.2 Clarification of Functions and Refinement of Responsibilities

In recent years, the Foreign Affairs Office of Shaanxi Province has implemented a list system and compiled a list of powers and responsibilities. At present, the internal functions of Shaanxi Foreign Affairs Office and the public announcement of its external functions are all characterized by clarification. For example, in the description of functions announced on the current Shaanxi Foreign Affairs Portal, the expression "responsible for matters related to going abroad on official business"^[2] in the 2014 version of the Provisions on the Main Duties, Internal Organizations and Staffing of the Foreign Affairs Office of the People's Government of Shaanxi Province has been changed to "examining and approving matters related to temporary departure for official business for personnel at the departmental bureau level and below, and examining and approving matters related to temporary departure for official business for personnel at the departmental bureau level and below. temporary departure on official business and related matters and handle the relevant formalities" ^[5], "to undertake matters relating to the invitation of foreign personnel to visit" ^[2] amended to "to undertake matters relating to the invitation of foreign personnel to visit the specific reporting and approval" ^[5], clear The objects and contents of the corresponding functions are clarified.

For the public, the Provincial Foreign Affairs Office, in accordance with the requirements of "standardized by law, comprehensive

and accurate, open and transparent, and convenient for the people", has formulated and released a list of public service matters and a service guide in the portal website. The list and guide contain information on the contents of public service matters and their corresponding acceptance units, consultation methods, processing time limit, processing basis, application materials, processing procedures and costs, etc., which greatly facilitates access by clerks and the public.

The Foreign Affairs Office of Shaanxi Province has also demonstrated refinement characteristics in the process of adjusting the approval authority. In 2020, the central government formulated a series of regulations on foreign affairs management of central enterprises, and adjusted the approval and management authority for the personnel of provincial enterprises to go abroad. Shaanxi Province formulated the foreign affairs management regulations for provincial enterprises in Shaanxi Province in accordance with the relevant provisions of the central government. The most notable change in the new regulations is that a large part of the authority originally required to be reported to the provincial government for approval has been decentralized to the Foreign Affairs Office, and at present, in addition to the trio of the enterprise chairman, general manager and party secretary whose trips need to be reported to the provincial government, all the enterprise personnel's trips can be directly approved by the Foreign Affairs Office. This adjustment presents a refined feature in the identification of the approval object and the decentralization of the approver's authority, thus providing greater convenience for enterprises to go out.

As a matter of fact, as early as 2016, Shaanxi Foreign Affairs Office had already communicated closely with the provincial SASAC and took the lead in the initial attempt to decentralize the approval authority and liberalize the approval policy, stipulating that in addition to the visits of members of the leading team of the enterprise that need to be approved by the provincial government, the visits of all other personnel can be directly approved by the Foreign Affairs Office. The official regulations in 2020 institutionalized the reform results, while further empowering the Foreign Affairs Office and also further liberalizing the restrictions on the personnel who can be directly approved by the Foreign Affairs Office. Shaanxi Foreign Affairs Office has shown autonomy, innovation and foresight in the optimization of this approval system. The efforts made by the Foreign Affairs Office to adapt to the trend of reform and explore reforms by exercising its subjective initiative in this process are worthy of reference and study.

3.3 Combination of Decentralization and Indicatorized Putting in Place and Management

In terms of decentralization to facilitate enterprises, the provincial foreign affairs office has made many innovative policy adjustments in recent years. In order to adapt to the current reality of frequent foreign exchanges and increased demand for enterprise visits, the Foreign Affairs Office has implemented on-demand visits and supported multiple approvals in a year. In addition, the foreign affairs management regulations for enterprises introduced in 2020 broke through the three-month time limit for temporary travel on official business and allowed permanent approval of enterprises, which provides institutional support for expanding opening up to the outside world.

In terms of the combination of release and management, since 2020, as the central government has introduced policies on strengthening the management of affairs during and after the event, the Shaanxi Foreign Affairs Office has immediately grasped the relevant spirit to carry out reforms, and has gradually formed a foreign affairs regulatory experience with relatively local characteristics. In 2020, the provincial Foreign Affairs Office set up a series of assessment standards for the completion of the tasks of enterprise visits and the implementation of after-action supervision, focusing on the work of the enterprise personnel during their stay abroad after the visit, the results of the implementation of the visit plan and the required actions, and the follow-up after the visit, and evaluating the results by scoring, and following them up with an assessment frequency of every six months. The Foreign Affairs Office will link the scoring results to the issuance of targets for the number of corporate visits in the following year, and reduce the targets for those whose scores are deducted. This initiative was developed to avoid wasting targets and resources, and to ensure that visits are practical and effective, providing a boost to Shaanxi Province's socio-economic development.

This monitoring system will be formally implemented in 2023, and in the future, the Foreign Affairs Office will test the effectiveness of the system and the scientificity of the assessment criteria, and continuously improve the corresponding monitoring system under the guidance of this monitoring concept. This initiative in the simplification of government and decentralization at the

same time to change the concept of supervision, to promote the management of the incident after the event, in the focus on the prevention of the prior, risk-oriented basis to achieve the change from "strict entry and leniency" to "leniency and strict control".

3.4 Promoting service optimization in various aspects

The service functions of the Foreign Affairs Office are more prominently reflected in the consular protection work and administrative approval. In the consular protection work, the Foreign Affairs Office consular office is mainly responsible for the protection of the rights and interests of overseas citizens and compatriots, to assist in reviewing and coordinating the handling of foreign-related cases, policy and interpretation of laws and regulations, and at the same time to coordinate the relevant docking work of foreign consulates in Shaanxi.

The special nature of the administrative approval of the foreign affairs management department is that, to a large extent, it has intersection with the consular protection work, the administrative approval not only focuses on the control of qualifications and indicators, but also focuses on the control of the risk of personnel visits. In short, the provincial foreign affairs office will be the approval work as the political security risk control of the front work, do a good job of the first risk assessment and prevention, in addition to the current foreign affairs office functions in the original "understand and supervise the province's foreign-related activities of the personnel abroad on official business" and then added "and put forward the corresponding recommendations and measures" [5] specific expressions, clear foreign affairs office in the risk analysis and prevention, services, government and business personnel visit the corresponding responsibilities.

Optimization of services, fundamentally from the system, procedures and ways to optimize the convenience of service for the people and people's satisfaction. In the relevant aspects, the Foreign Affairs Office opened a green channel, basically realized the online through the office, and allows online and offline synchronization, so that the people to run less, and improve the efficiency of government work. In addition, the Foreign Affairs Office has also optimized its services from some details, such as passport processing and visit approval can be accelerated according to the actual needs of the process. Overall, the provincial foreign affairs office in the foreign affairs service using Internet technology and procedural modifications, increasing the flexibility of the system, so as to better serve the needs of the public and enterprises.

Optimization of services relies not only on the modernization of means and tools, but also on the professionalization of business personnel in the operation process. In recent years, it has become a mechanism for the Foreign Affairs Office to hold regular annual business training and policy briefing to follow up on the optimization of functions and operations in real time. In addition, the Foreign Affairs Office real-time updates and publishes instructive materials such as the handbook for specialized staff and the manual for visa processing to provide guidance for practical operation. This initiative ensures the implementation of policy and procedure optimization in actual operation, and ensures that the service optimization is real and effective.

4. Development Dilemma of Shaanxi Foreign Affairs Office

The achievements of the Foreign Affairs Office of Shaanxi Province in the areas of functional transformation and "release of management and service" are notable, but in the process of independent exploration, due to the lack of existing experience, there are still some degree of systemic constraints as well as operational difficulties, which limit the Office's further function of expanding openness to the outside world.

4.1 Maturity of program design needs to be improved

With the rapid achievements of city diplomacy work, in recent years, with the work of Friendship Cities and city diplomacy, some countries have started to set up consulates in Shaanxi, and accordingly some program designs have exposed unscientific and immature nature. For example, at present, on the online approval procedure of the foreign consulates in Shaanxi Province, the consular personnel identity documents need to be processed by the consulate to take note of the embassy seal, while the embassy seal filing office requires the presentation of identity documents, the existence of this contradiction has not been resolved, and it has become a factor that delays the work of the consulate landing and affects the development of diplomatic relations.

4.2 Indicators and Processes Not Adapted to Modern Needs

With the increase of China's total economic development and the need to promote globalization, it is a general trend to raise the

level of opening up to the outside world. With frequent exchanges and increased affairs with foreign countries, the demand for resident or representative offices in foreign countries has increased significantly in recent years from many enterprises to government departments and universities. However, the reality of the same environment is that, in view of the uncertainty of the international situation, China mainly pursues a risk-oriented foreign affairs management ideas. As a result, the demand for visiting subjects is increasing, while the approval procedure for international exchange is showing a tendency to become stricter.

In this context, in order to activate the opening up of the economy, the provincial Foreign Affairs Office has implemented the management of on-demand visits for enterprises, with no limit on the number of visitors, time and destination, and generally speaking, there is more room for liberalization and decentralization. As for the visits of party and government personnel, the Foreign Affairs Office has always been based on the principle of strictness and tightness, and has implemented the distribution management method for approval, with increasingly stringent standards and a gradually higher threshold.

In fact, the party and government personnel visits and enterprise foreign cooperation between there are many cross, the current construction of free trade zones, the construction of the international industrial chain also requires the party and government personnel with the relevant foreign responsible person for direct communication and discussion, and the party and government personnel exchanges with foreign countries is also a provincial and municipal opening up of a content of the work of the high-level leaders to communicate with each other for the cooperation and the consensus reached often play a multiplier effect. Therefore, the approval of the party and government personnel to visit the strict, in fact, to a certain extent, also restricts the opening up of the economy and the development of urban diplomacy.

In addition to the international relations and the situation of the irresistible factors, there are two aspects of human factors constraints on the relaxation of the approval. The most basic factor is the design of the total number of indicators. At present, the Foreign Affairs Office adopts an allocation management approach to approving visits by party and government personnel, and the total number of visits available for allocation still adopts the standards set by the government many years ago. However, the rate of growth of the total economy in recent years has led to an increase in the total demand for visits. Under the constraints of the total number of missions, the approval of foreign affairs offices has had to raise the threshold of entry by means of standardized heat-proofing, which has put a certain amount of pressure on the work of foreign affairs offices.

In terms of procedure and process design, there is a similar inability to adapt to new demands. Although the OFT has promoted many related facilitation initiatives such as enterprise resident approval and one-year multiple approvals since 2020, the optimization of these systems still belongs to the exploratory stage, with no previous experience to follow and a lack of clear theoretical and documented guidance, and thus potential risks, regulatory difficulties and governance challenges may constantly arise in the process.

Another immediate problem is that, with the increasingly close ties between countries, the scope of the subject's external interactions is no longer limited to a single country, but has become a new need and trend for exchanges between multiple countries within the same region. In other words, multilateralism has been reflected in the city's foreign exchanges as well as the need for enterprises and departments to visit. However, at present, China has not yet formed the approval and visa stamping procedures for the movement of enterprises or departmental personnel between multiple countries in the region as well as multiple round trips, which directly restricts the establishment of regional representative offices and the development of foreign exchanges of multiple subjects.

4.3 Specialized construction of foreign-related management needs to be improved

In the process of carrying out foreign-related management work of the Foreign Affairs Office, especially foreign-related consular protection work, the staff has experienced the difficulty in dealing with practical problems, and the lack of relevant laws and regulations, as well as the difficulty in applying and interpreting the corresponding laws. Due to the limitation of authority and resources, the Foreign Affairs Office is also unable to deal with relatively complicated consular cases in a timely manner. In the process of information dissemination, local foreign affairs offices are also restricted by their authority and can only report to the Department of Consular Affairs, but are unable to get sufficient intellectual support and legal assistance.

This situation has hindered the resolution of foreign-related cases and disputes over citizens' rights and interests, and has caused problems for both the personnel of the foreign affairs offices and the citizens and expatriates abroad. In fact, the rule of law in foreign-related management not only relies on consular protection and related laws and regulations on consular protection, but also

involves the qualification examination of enterprises and employees, the implementation of the rule of law in exit and entry management, as well as the coordination of international law, civil and even criminal procedural law and other legal disciplines, in addition to relying on the professionalism of the staff of the office.

The core spirit of the administrative system reform is to promote the organic unity of the Party's leadership, the rule of law and the people's ownership. In foreign-related management, especially in consular protection, it is important to further study and promote the legal basis of some difficult issues, and the professional ability and legal literacy of the consular protection staff should be excellent in order to cope with various situations. At the same time, provincial, municipal and national consular protection agencies, diplomatic agencies and other organizations should form a joint office or consulting mechanism to jointly seek optimal solutions to difficult foreign-related cases.

4.4 Mechanical obstacles to foreign cooperation

In the process of promoting foreign economic and trade cooperation and humanistic exchanges independently carried out by the provincial foreign affairs office, in addition to the international situation, political relations and other macro factors, a major obstacle lies in the differences in the functions of inter-country institutions. For example, due to the fragmentation and specialization of Japan and South Korea's international exchange offices, in the promotion of cooperation and exchanges between Japan and South Korea, the Foreign Affairs Office often encounters a situation where the diplomatic objectives do not correspond to the functions of the other office, which makes it impossible to promote economic and trade cooperation in the plan.

In order to solve this problem, the Foreign Affairs Office tries to implant China's economic development ideas and publicity of foreign cooperation projects in various humanistic exchange activities, and tries to mobilize the interest of international friends to take the initiative to carry out economic and trade cooperation. However, the solution to the institutional obstacles should also rely on institutional adjustments. At present, the Foreign Affairs Office is unable to carry out economic and trade cooperation in consultation with the corresponding humanities exchange agencies, but the Foreign Affairs Office has the possibility of promoting cooperation between specialized economic and trade departments, and mobilizing the domestic counterparts to cooperate with the corresponding foreign departments is a possible breakthrough in solving the institutional obstacles to cooperation.

5. Future Development Direction and Suggestions

In view of the experiences and dilemmas of Shaanxi Foreign Affairs Office in the process of development, this research summarizes the following future trends and suggestions.

5.1 Conceptual change from passive to active, from relationship to knowledge coordination

In the past, the Foreign Affairs Office has been more of a behind-the-scenes participant and facilitator of state-sponsored activities, providing support and services for the foreign affairs work of various departments. In these jobs, the essence of the work of the Foreign Affairs Office is the docking of the relationship between the main body of domestic diplomacy and foreign affairs and the main body of foreign countries, playing the role of a bridge and intermediary.

Nowadays, foreign affairs have penetrated into all aspects of society, from the Ministry of Commerce and even the Ministry of Justice and other government departments, to enterprises, universities and various civil organizations and groups, have established their own foreign affairs function agencies to carry out foreign affairs work. However, unequal information and poor communication often bring difficulties and even conflicts in the process of inter-departmental cooperation and synergistic development. In addition, the foreign affairs personnel, relations, information and functional roles of various departments, levels and fields have a lot of room for development and utilization as the province's foreign affairs resources.

Facing the future, the functional transformation of local foreign affairs offices is fundamentally a change of concept and role orientation. As an organization responsible for the province's foreign affairs management of the party and government coordination, the provincial foreign affairs office should not only better undertake the domestic and international relations of the higher-ups, but should also take the initiative for the departments and private foreign affairs subjects to matchmaking, and carry out exchanges. Further, the Foreign Affairs Office should not only do a good job in the traditional sense of domestic and foreign relations docking

work, but should also play the function of management under the port, and do a good job in the province's resources and information coordination and leadership, to realize the change of functions.

In terms of specific work, on the one hand, the advantages of the Foreign Affairs Office in obtaining foreign affairs information should be fully utilized to summarize and establish an information-sharing platform to provide information, resources and intellectual support for the development and design of foreign affairs activities of each subject. On the other hand, it is a successful experience for the Foreign Affairs Office of Shaanxi Province to promote the integration of party and government organizations. The Foreign Affairs Office after institutional reform, as a department of party-government coordination, should have the right to play a guiding or even commanding role over the foreign affairs work of various departments and bureaus in the province, such as the Development and Reform Commission and the Bureau of Commerce. The Foreign Affairs Office should have the right to coordinate the foreign affairs work of all departments and subjects, macroscopically grasp the foreign affairs work carried out by all departments, and supervise its implementation. At the same time, it should also take the initiative to build bridges between departments to form a province-wide joint effort to improve the level of opening up to the outside world in all aspects. In addition, the Foreign Affairs Office should have the right to coordinate and invite other departments to participate in the docking as needed in the process of carrying out foreign exchanges and promoting cooperation, so as to better achieve the international cooperation of the counterparts.

Not only that, serving the country's overall diplomacy not only relies on the enhancement of the capacity of individual provinces and municipalities, but should also unite the resources and information of different provinces, so as to take what is needed and realize the comprehensive benefits. In terms of resource and information integration of friendly cities, the Foreign Affairs Office of Shaanxi Province has been in the forefront in providing information summarization for the province. In the future, on the basis of promoting relevant work within the province, the Foreign Affairs Office of each province and city should take the lead in promoting the exchange of foreign affairs information and sharing of resources across provinces and cities. Provide the support of information network for effective and favorable exploration of friendship city relationship. With the advancement of this work, the foreign affairs offices of provinces and cities will form a synergy among themselves to jointly serve the overall layout of great power diplomacy with Chinese characteristics.

5.2 Continuing to promote standard-setting, maturation of program design and professionalization of business level and talent team

The total demand for opening up to the outside world in the new era is not what it used to be. In order to better serve the economic development and social needs, in the further reform, the number of restrictions and approval thresholds of going abroad on official business should be relaxed to a certain extent. In the long run, we should be pragmatic, establish a real-time indicator update mechanism oriented to the needs of economic development and foreign exchange, and carry out strict approval and preparatory work oriented to risk control, so as to combine the two and take into account the security and development in the process of opening up to the outside world.

In addition, to meet the new functions of the Foreign Affairs Office and optimize its services, more stringent requirements have been put forward for the maturity of the procedures and professionalism of the service personnel in the Foreign Affairs Office's business processing. Along with the macro transformation of functional roles, the micro and even detailed issues of technology utilization and process design should be further dealt with. On the one hand, eliminate the contradictions and inefficiencies in the work interface and process to ensure the smoothness of business processing. On the other hand, for the reception of foreign guests, meeting design, event preparation and other work, fixed procedures and process samples can be studied and summarized, thus providing support for future external exchanges of greater number and higher frequency.

Finally, the foreign affairs office should further improve the construction of the personnel team. At present, the local foreign affairs office pays the most attention to the language ability of the clerks, and there are certain professional restrictions in the recruitment requirements. However, the problem of limitation by professional name has appeared in the current recruitment of talents. In terms of future personnel, the Foreign Affairs Office should consider taking the type and ability of talents as the guide, relaxing the restriction of professional names in recruitment for different posts and functions such as consular, diplomatic, legal, etc., and designing a more scientific recruitment and assessment method, so as to further select comprehensive talents with good political quality, strong

professional ability and high business level, in order to make up for the shortage of talents in relevant functional posts. In terms of staff training, it should further ensure the implementation of business training and policy dissemination in place, so as to ensure the effective optimization of services.

6. Conclusion

Due to China's administrative system reform has been in the aforementioned government-market-society relationship framework, has been the local foreign affairs department in this relationship framework in a marginal position. Foreign affairs departments have the dual nature of internal service and management as well as opening to the outside world, and apart from the simplification of the foreign affairs office's management of commerce and enterprises, the successive administrative reforms have provided less clear guidance to other foreign affairs management work of the foreign affairs office. In the future, relevant research and practice should be equally emphasized.

On the one hand, from a realistic point of view, China's foreign affairs departments at all levels have not lagged behind in their institutional reforms; they have adapted to the requirements and trends of the national administrative system reform, grasped the spirit of the central documents, and followed the footsteps of the central government's reforms while exerting their creativity, exploring and developing independently, and have achieved relatively good results. On the other hand, the international environment and China's diplomatic situation under the unprecedented changes in the world, China's position in the international arena and the necessity of comprehensively improving the level of opening up to the outside world have put forward stricter requirements for the development of the foreign affairs departments of the Chinese government, and the opening up of the city to the outside world as well as the accompanying management of the city's foreign affairs should be given greater attention. How to better serve the country's overall diplomacy and local economic and social development in terms of diplomacy and foreign affairs management has become an increasingly important proposition for local foreign affairs departments.

In this research, it can be seen from the development history of the Foreign Affairs Office of Shaanxi Province and the results of its work in recent years that the local foreign affairs management departments have followed the footsteps of the central government to carry out institutional reforms and functional changes in the context of the administrative system reform, and at the same time, according to the requirements of the times, they have played out the special functions of serving the country's overall diplomacy and leading the work of the local foreign affairs and have continued to think about the role of their duties, forming a series of experiences and at the same time, encountering a series of predicaments. encountered a series of dilemmas. In the future, the government reform process should further promote the reform and innovation of local foreign affairs departments, pay attention to the relationship between foreign affairs departments and other government departments and social subjects, and at the same time pay attention to the design of procedures and the structure of talents at the micro level. In the face of unprecedented changes, local foreign affairs administrations should make concerted efforts to synergize the development of local foreign affairs management and service capacity, so as to lay a solid foundation for seizing the strategic opportunity period while coping with the high winds and waves, or even the turbulence of the stormy sea.

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Research on Learners' Emotion Recognition Method in Teaching Environment

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Abstract: In this study, the authors propose a method that combines CNN and LSTM networks to recognize facial expressions. To handle illumination changes and preserve edge information in the image, the method uses two different preprocessing techniques. The preprocessed image is then fed into two independent CNN layers for feature extraction. The extracted features are then fused with an LSTM layer to capture the temporal dynamics of facial expressions. To evaluate the method's performance, the authors use the FER2013 dataset, which contains over 35,000 facial images with seven different expressions. To ensure a balanced distribution of the expressions in the training and testing sets, a mixing matrix is generated. The models in FER on the FER2013 dataset with an accuracy of 73.72%. The use of Focal loss, a variant of cross-entropy loss, improves the model's performance, especially in handling class imbalance. Overall, the proposed method demonstrates strong generalization ability and robustness to variations in illumination and facial expressions. It has the potential to be applied in various real-world applications such as emotion recognition in virtual assistants, driver monitoring systems, and mental health diagnosis.

Keywords: Emotion Recognition; Teaching Environment; Facial Expressions

Introduction

Facial expressions on the human face are a fundamental way for humans to convey their inner emotions. Human beings understand each other's inner feelings by observing the changes in their facial expressions, and at the same time express their inner emotions intuitively and accurately through facial expressions. The use of facial expression recognition systems in real life has broad application prospects, and it can simply and quickly obtain customers' recognition of service attitudes and service quality. For example, the catering industry can measure the deliciousness of dishes based on the user's facial expressions and emotions. Medical institutions can analyze the patient's state through the patient's facial expression and emotion, so as to provide more detailed medical care. With the rapid development of face recognition technology, facial expression recognition has become one of the main research directions of academic experts. The research content covers various disciplines, including psychology, biological neurology, information science, etc., is a complex subject with great challenges and high research value. Facial expression recognition technology includes six parts, involving the input of facial expression images, the detection of human faces, and the recognition of facial expression features. With the in-depth study, it has driven the development of artificial intelligence, computer vision, biometric features and psychology, and promoted the proposal of new methods and theories.

It mainly applies convolutional neural network, and has made remarkable achievements in facial expression recognition. Since the neural network is trained through the dataset, its performance is usually better than traditional methods. However, when real-time is considered, it is difficult for deep learning to process temporal and spatial signals to obtain better emotion recognition performance. Many two-dimensional CNNs cannot recognize temporal information. In this case, researchers have developed a method that combines temporal and spatial features, namely CNN-LSTM. Inspired by this framework, this paper employs a CNN-LSTM model for image sequences acquired from datasets and real-time environments.

1. Literature Review

AlexNet was a significant breakthrough in deep learning and computer vision, as it demonstrated that deep convolutional neural networks could achieve superior performance in image classification tasks. Since its introduction, numerous variations of AlexNet have been proposed, and its architecture has inspired the design of many other successful deep neural networks, such as VGGNet, GoogleNet, and ResNet.

These networks have shown remarkable performance on large-scale datasets and have enabled the development of many practical applications, such as self-driving cars, medical diagnosis, and surveillance systems.

When using CNN network to extract features, time information will be ignored, and it will be inaccurate when processing real-time video information. Therefore, scholars have developed several deep learning networks that can simultaneously learn temporal and spatial features (Shahabinejad, et al., 2021 & Akhand, et al., 2021). The neural network model combining CNN and LSTM is used to jointly learn spatial and temporal features to complete different target recognition tasks.

Due to the continuous development of deep learning technology, expression analysis technology is gradually divided into traditional analysis methods and machine learning analysis methods (Altaher, et al., 2020). On the one hand, traditional analysis methods use linear discriminant analysis method. LDA is the most typical tool for feature extraction and data dimensionality reduction in the field of pattern recognition. It is easier to classify. ICA is a way to describe multivariate data sets using a linear coordinate system. It belongs to the unsupervised, adaptive component analysis method, ICA algorithm The main part is the optimization criterion, which is used to judge whether the result is good or bad. The combination of ICA and LDA is to map the collected n-dimensional information to n-dimensional. After the goal of dimensionality reduction has been achieved, the image information is described twice, and then the expression is extracted. Key information (Borgalli, et al., 2020). On the other hand, the local binary model LBP (Local binary Pattern) uses the amplitude and the image frame as a product, and then uses LBP to input the product to the support vector machine to extract the expression information. Through the layer-by-layer feature extraction and layer-by-layer abstraction between the established networks, the final information is purified to obtain the expression information in the input image frame. Purpose (Mellouk, et al., 2021).

Contrastive loss, triplet loss, center loss, and Focal loss allow samples to be evenly distributed around the center of the class to minimize intra-class differences, but the calculation efficiency is too low. By focusing on the parameter $\sqrt{\lambda}$, the model can pay more attention to difficult-to-classify samples and improve the classification performance of the model, but it cannot solve the labeling sample problem (Nonis, et al., 2021 & Ab Wahab, et al., 2021). Facial expression recognition using deep learning techniques has become a popular research topic in recent years. To improve the performance of facial expression recognition models, various loss functions have been proposed to optimize the model parameters. Among them, Contrastive loss, triplet loss, center loss, and Focal loss are commonly used in deep learning-based facial expression recognition models.

Contrastive loss and triplet loss are designed to minimize the distance. Center loss, on the other hand, focuses on minimizing intra-class variance by forcing samples to be evenly distributed around the center of the class. Focal loss is designed to address the problem of class imbalance by giving more weight to hard-to-classify samples. However, these loss functions can be computationally expensive and may not be efficient for real-time applications. To address this issue, researchers have proposed various techniques to improve the efficiency of these loss functions, such as using the parameter $\sqrt{\lambda}$ to focus on difficult-to-classify samples.

In this paper, the researchers have used the Focal loss function in the CNN-LSTM model for facial expression recognition. The Focal loss function is designed to focus on hard-to-classify samples and has been shown to be effective in addressing class imbalance problems. By using the Focal loss function, the researchers aim to improve the classification performance of the CNN-LSTM model for facial expression recognition. Overall, the development and application of efficient loss functions for facial expression recognition models are crucial to improve their performance and enable their use in real-world applications.

2. Research methods

2.1 Image preprocessing

Facial key point detection is an important part of facial analysis, and it is the basic technology for applications such as face recognition, expression judgment, and 3D facial remodeling. The key point is to reflect the facial features of various parts, and with the

development of technology and precision With the improvement of the level, the number of face key points has also increased from the original five points to more than two hundred points today. Due to the increasing development of various technologies in computer vision, face key point detection can be divided into Parametric method and non-parametric method The way of parametric model can be divided into local-based method and global-based method according to its external modeling, using partial or global appearance features for modeling, and predicting key points through graphical models. At present, the best and most widely used method is the method based on deep learning.

Key point processing is based on deep learning.

In order to unify the input data, first detect the face area, then crop and adjust the detected face size to 96×96 pixels, the adjusted probability density function calculation formula is:

$$P(G_k) = \frac{N_k}{N} \quad (1)$$

Among them, G_k is the drawing image, N_k is the number of occurrences of G_k , and N is the total number of pixels in the image.

Next, the quality of the image is improved through the transformation function $T()$, and the weighted histogram is equalized as:

$$P_w(G_k) = T\{P(G_k)\}$$

$$P_w(G_k) = \begin{cases} P_w(G_k), & P(G_k) > \tau_1 \\ 0, & P(G_k) < \tau_2 \end{cases} \quad (2)$$

Among them, τ_1 and τ_2 are the upper and lower limits, defined as follows, where β is the weight function, and $\beta < 1$ and non-zero.

Therefore, the calculation formula of histogram equalization is as follows:

$$P_w(G_k) = \left[\frac{P(G_k) - \tau_2}{\tau_1 - \tau_2} \right] \times \tau, \tau_1 < \tau < \tau_2 \quad (3)$$

Use the above formula to process images with different lighting conditions as one of the inputs to the CNN. Second, edge enhancement is performed on the same group of images, and edge pixels are enhanced using Euclidean distance and chamfering distance. The distance is to use the nearest distance value to mark the pixel value in the image, and the Euclidean distance uses the average distance.

2.2 Feature extraction

In the network used in this paper, the batch adjustment and ReLU activation function are used, so the network can effectively learn the characteristics of the image. The specific formula is as follows:

$$\text{ReLU}(x) = \max(0, x) \quad (3)$$

The CNN used in this article consists of 5 convolutional layers, the filter size is 5×5, and the pooling layer selects the maximum pooling. After 5 feature extractions, the extracted features are sent to the fully connected layer, and integrated with the LSTM layer. Together. The specific parameters of each layer are shown in Table 1.

2.3 Focal loss

In the expression recognition task, the loss function in the multi-classification task will lead to poor classification performance due to the imbalance of samples. Therefore, in response to this problem, the standard cross entropy loss function is improved, and a focal loss function (Focal loss) is proposed. The formula is as follows:

$$FL = -\alpha(1-p_i)^\gamma \ln p_i \quad (3)$$

If the sample is misclassified, p_i is an infinitesimal number, so $(1 - p_i)^\gamma$ is close to 1, and when the correct classification is p_i is 1,

$(1 - p) \gamma$ is close to 0. Focalloss can be applied to difficult samples by controlling the modulation coefficient, and achieve the purpose of balancing the number of samples of different categories through the balance parameter α .

3. Results

3.1 Experimental environment

The computer processor used in this experiment is AMD Ryzen 7-1700 model, the graphics card is GTX 1080 TITAN, and the memory is 16 GB. The neural network part is built using the open source Keras module, and the software programming environment is python3 0.

3.2 Facial Expression Dataset

In order to prove the effectiveness of the proposed architecture, experiments were done on the facial expression database of FER2013. The number of pictures of the six expressions in each database is shown in Table 1.

3.3 Analysis of results

1) Use two methods of histogram equalization and edge enhancement to preprocess FER2013, and use the model proposed in this paper to verify the accuracy of the processed pictures. The accuracy of the two preprocessing models is compared as shown in Table 3. See The accuracy rate obtained by using edge enhancement is 3%~8% higher, and the accuracy rate is 80.14% in the FER2013 data set after using the edge enhancement preprocessing method .

2) In order to verify the effectiveness on the cross dataset, a mixing matrix was made according to the FER2013 dataset.

3) Finally, compare with the accuracy of several existing international methods on the FER2013 dataset. The accuracy rate of the CNN-LSTM model proposed in this paper is 9.65% higher than the current algorithm with the highest accuracy rate. The specific data are shown in Table 4.

Discussion

Facial expression recognition is a challenging task due to various factors, such as changes in lighting conditions, facial expressions, and occlusions. In this paper, the researchers propose a new method for facial expression recognition that addresses these challenges by using edge enhancement and histogram equalization as preprocessing methods. The edge enhancement technique is used to improve the contrast and sharpness of the facial features, while histogram equalization is used to normalize the distribution of pixel intensities in the image. These preprocessing techniques help to deal with various lighting conditions in different environments.

In addition, the researchers use a combination of two modules, CNN and LSTM, to learn both spatial and temporal features from the facial images. The CNN module is used to extract spatial features from the images, while the LSTM module is used to capture the temporal dynamics across the frames. To optimize the model parameters, the researchers use the Focal loss function, which is designed to address the problem of class imbalance by giving more weight to hard-to-classify samples. The Focal loss function has been shown to be effective in improving the classification performance of deep learning models. The method achieves better classification performance when the training samples are relatively small relative to the local information. However, there is still a need for further research to improve the robustness of the model in more complex environments, such as outdoor settings. In future research, it is expected that the proposed method can be further optimized and extended to be applied, such as emotion recognition in human-robot interaction, healthcare, and education.

Facial expression recognition technology has become an important research area. The technology involves three main steps: face detection and collection, expression feature extraction, and facial expression analysis. The first step of face detection and collection is critical in facial expression recognition, as it involves locating the face in an image or video and collecting the necessary data for expression analysis. In recent years, face detection and collection have become increasingly mature as an independent research direction, with numerous algorithms and techniques being developed for this purpose.

The second step is the core issue of facial expression recognition research, as it involves extracting effective features from the face that can describe the differences between different expressions. There are various techniques for extracting expression features, including geometric features, appearance features, and texture features. These features can be extracted from different regions of the face, such as the eyes, mouth, and nose. The third step of facial expression analysis involves selecting the correct facial expression

recognition classifier for the extracted expression features to identify the expression. The choice of classifier depends on the specific requirements of the application, such as real-time performance, accuracy, and robustness.

Improving the accuracy of facial expression classification is a relevant scientific research goal, as it has important applications in various fields, such as human-robot interaction, healthcare, and education. Deep learning techniques have shown remarkable performance in facial expression recognition, and researchers are exploring new methods to improve the accuracy and efficiency of these techniques. The use of convolutional neural networks (CNNs) in deep learning for facial key point detection and expression recognition has shown significant progress in recent years. This approach involves training a CNN to locate the key points of the face, such as the eyes, nose, and mouth, and then combining this information with the CNN to estimate facial expressions.

While this approach has shown promising results in accurately estimating facial expressions, it still faces challenges in specific uncontrollable scenes, such as image occlusion or background interference factors. These challenges can lead to misjudgment due to changes in the front and rear frames of the image or too many background factors.

Another challenge of this approach is its limited real-time performance due to the use of CNNs with many layers and two input and output streams. Although the estimation accuracy is high, the real-time performance of the system is average, which can limit its use in real-world applications. To address these challenges, researchers are exploring ways to balance the real-time performance. This includes exploring the use of lightweight CNN models that can achieve high accuracy with fewer layers and parameters. Additionally, techniques such as data augmentation, transfer learning, and optimization algorithms can be used to improve the efficiency.

In summary, while the use of CNNs for facial key point detection and expression recognition has shown significant progress, there are still challenges to be addressed to achieve robust performance in various real-world scenarios. Continued research and development in this area can lead to the development of more efficient and accurate facial expression recognition systems.

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Tables and figures

Table 1 Number of 6 expressions in FER2013

data set	anger	disgust	fear	happy	sad	surprise
FER2013	4 953	5 47	5 121	8 989	6 077	4 002

Table 2 Accuracy % using different preprocessing methods

Model	Histogram equalization ratio	edge enhancement
FER2013 _	7 7.32	8 0.14

Table 3 FER2013 mixing matrix %

expression	anger	disgust	fear	happy	sad	surprise
anger	9 1.3	2 .6	0.9 _	0	0	0
disgust	2.7	90.1	1.2	0	0	0
fear	0	0	88.2	4.8	1.35	5.6
happy	1.1	0	0.9	92.6	0	0
sad	0	0	0.99	0	91.1	0
surprise	0.3	0	0	0	0.7	89.2

Table 4 Accuracy % of recognition by different methods on the FER2013 dataset

Model	Accuracy
CNN+Improve_Softmax	70.91
DNNRL	70.60
SHCNN	69.10
VGG+Focal loss	72.49
LSTM+CNN	82.14

Appendix:

Soft skills: Through the preliminary analysis of the thesis topic, I have improved in data collection and analysis, code writing, result analysis, and paper structure layout. This process made me clear about the important value of the paper. The first is logic, the overall logic of the paper can help me and readers improve the reading ability of the article; Secondly, the level of analysis, I made it clear in the processing of experimental results that in addition to the description of the phenomenon, it is also necessary to strengthen the analysis of the essential phenomenon behind the content. Finally, this process improves the comprehensive ability of thesis writing.

Hard skills: Construction of CNN networks, construction of LSTM networks, Keras, sklearn, numpy, pandas, etc Commonly used function calls in Python and Origin to draw experimental diagrams

The Application Research of "Combination of Competition and Practice" in College Tennis Course

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Abstract: Tennis, as an important project of sports, has an obvious role in cultivating students' physical quality, observation ability and reaction speed. Under the background that the country attaches great importance to students' physical literacy, the traditional single and passive teaching has been unable to meet the practical needs, so it is necessary to strengthen the innovation of teaching methods. With the recognition of many teachers, the teaching method of "combining competition and practice" has been continuously promoted. The paper takes the combination of competition and practice as the teaching mode, and studies the teaching of college tennis sports.

Keywords: Combination of Competition and Practice; Universities; Tennis Teaching

Introduction

In recent years, the country attaches great importance to physical exercise for young people. The "Healthy China 2030" planning Outline emphasizes to strengthen the cultivation of young people's interests in physical exercise, teaching students at least one sport in physical education classes, and requiring students to exercise to spend more than one hour a day on campus. In 2020, the General Office of the CPC Central Committee issued the Opinions on Comprehensively Strengthening and Improving School Physical Education in the New Era, emphasizing that while colleges and universities are cultivating students' professional knowledge, they should also pay attention to students' spiritual education, strengthen students' physical training and train students to become high-quality talents with the comprehensive development of moral, intellectual, physical, aesthetic and labor. But the current part of the university physical education teaching situation, tennis, for example, many tennis teachers still adopt the traditional teaching method for teaching, not only boring teaching method, teaching content is relatively single, classroom dominated by teachers, most students in a passive state, it is difficult to stimulate the innovation consciousness and autonomous learning motivation. Using the teaching method of "combination of competition and practice" (that is, the combination of tennis match and tennis skill practice), students can practice students' tennis skills at the same time, and strive to achieve the level of competitive learning, so as to maximize the learning effect of tennis course.

1. Study subjects and methods

1.1 Study subjects

The college tennis course "practice" teaching mode in Nanchang aviation university college of science and technology as the object, selected the author as several class of a class students for the experimental group, class size of 50, choose a class with traditional teaching method of tennis course teaching, using the way of comparative research, the research process, hours for 2 times a week, 18 weeks for a semester.

1.2 Study Methods

This paper adopts the methods of questionnaire survey, field investigation and interview, literature study and comparative analysis to verify the feasibility and effectiveness of the teaching mode of "combination of competition and practice".

2. Application of the teaching mode of "combining competition and practice" in tennis teaching

2.1 Actively create a good competition atmosphere

In the teaching of tennis course, it is necessary to create a good learning atmosphere for students. For example, before the beginning of tennis technology, the origin and development process of tennis, tennis are briefly introduced to help students understand the specific situation of tennis. The method adopted can be short video teaching, online courses and other ways, so that students can directly feel the charm of tennis by watching the relevant videos. The teaching mode of "combination of competition and practice" pays attention to the teaching process of tennis competition, so before practice, it is necessary to explain the basic referee method and integral rules of tennis in detail, so as to improve students' understanding of tennis activities. Through new media and short video platforms, students can broadcast live videos about game tactics and classic games to promote students' understanding of tennis. In the teaching of tennis course, teachers should follow the people-oriented education concept, fully respect the status of students in the class, guide students to actively participate in learning activities, encourage students to participate independently, and improve the level of tennis under the teaching mode of combining competition.

2.2 Common form of the "combination of competition and practice" mode

2.2.1 Practice of ball sense

"Ball sense" refers to the individual's touch, perception, control of the ball and its sensitivity to various situations in the ball game. Ball sense is one of the key skills to participate in the sport of tennis. It includes the accurate perception of the speed, rotation, elasticity and other aspects of the ball, and can accurately control the trajectory and speed of the ball through the movement and posture of the body. Having a good sense of the ball can help players to better grasp the opportunities in the game and improve their technical level. But the formation of the club is not achieved overnight, but needs to accumulate through a long time of practice. For example, backhand practice: let the students stand in a row in an open field, keep a certain distance from each other, teach them to pass the ball to the partner standing in front of him or her, and then the partner receives the ball to the next person for tennis sense training. Hands swing practice: arrange students to stand on both sides of the net in pairs, hold the racket with both hands, and swing with each other. Students should pass the ball to each other, and catch the ball with their hands and swing. Before the net: divide the students into groups and stand near the net. One student stands in front of the net, and the other students take turns serving, and the goal is to hit the ball in front of the net and intercept the ball with a racket and bring it back. Multi-directional hitting training: design some multi-angle hitting training, let the students practice catching and hitting the ball from different directions. For example, let the student stand in the bottom line, and then the teacher suddenly serves from the left or right side of the bottom line, asking the student to move quickly and return to the ball to increase the students' reaction speed and sense of the ball.

2.2.2 Practice of individual technology

Individual technique game exercises, including service practice, bottom line strike practice, forward tactical practice, offensive and defensive practice, etc. Serve practice is to improve the basic content of students' tennis technology, can simulate the game, using different tactics and techniques, let the students in the actual competition, such as arrange students group to serve game, serve in accordance with the rules of the game, then the other students to catch and return, in order to train students to serve technology. Bottom line shot is one of the most common technical action in tennis, can arrange students to practice the bottom line technique, such as setting the goals and rules, requires students to use various bottom line technique in the game, such as topspin, backspin, flat push, etc., improve their technical application ability and strategic thinking speed. The practice of attack and defense can be designed with some confrontation exercises, such as arranging a group of students to play the offensive side, a group of students to play the defense side, the teacher will adjust and guide according to the rules and situation of the game, so as to improve the students' attack and defense ability.

2.2.3 Tennis tactics

Tennis tactics refers to the tactical means and strategies used by athletes in the game, including establishing the position of the

court, serving strategy, attacking strike method, the choice of returning the opponent's ball, the handling of the defensive ball, changing the rhythm of the game, controlling the process of the game, and cracking the opponent's weaknesses and advantages. Improving students' tennis tactics is the key factor to win in tennis. The training of tennis tactics is inseparable from the actual tennis match, to train students' psychology, reaction, physical ability and skills in actual combat. Junior tennis competition emphasizes the player's serving skills, such as stability, the strength and speed of the attack to the standard, and the response and speed to the other side. Tennis games to learn to observe the opponent, to pay attention to the real-time state of both sides of the game, in order to play a role in their own games. Teachers can organize students to participate in tennis competitions in their spare time and gradually improve students' tennis skills.

3. Study conclusions and recommendations

3.1 Conclusion

First, the "combination of competition and training" is more in line with the education concept of higher education that pays attention to the all-round development of students' morality, intelligence, physique, beauty and labor. The combination of match and love can infiltrate ideological and political elements into tennis teaching and achieve the educational goal of "cultivating people by virtue". Through the combination of competition and practice, students can learn to observe and fight hard in the competition, and constantly find and solve problems. Second, the teaching of college tennis course adopts the teaching method of combining competition and practice, which has a good learning effect. It can help students to improve their tennis skills and learn to ponder and think about the psychological state of both sides in the game, so as to win the tennis match. Third, the combination of competition and practice can stimulate the students' interest in learning, change the students' traditional passive learning state, and master the rules and skills in the competition and practice.

3.2 Suggestions

First of all, in order to ensure the efficiency of the competition and practice combined with teaching methods, students should make full use of online MOOC resources to introduce tennis rules, basic tactics and referee methods before class or after class. At least 1~2 class hours should be allocated for students to learn theoretical knowledge, so as to prepare for the following technical exercises. Secondly, make full use of the online communication platform to understand students' needs and learning dynamics, communicate with students in time, and create a good learning atmosphere for students. Finally, attach great importance to the psychological state of students in the tennis match, strengthen the guidance of students' mentality adjustment, for the weak psychological quality of students to strengthen personal technical contact, and then conduct team training after the skilled skills.

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How to Stimulate Students' Interest in Learning in College Mathematics Teaching

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Abstract: In the process of teaching and learning at any stage, the important role of interest guidance cannot be ignored. Especially in college mathematics teaching, mathematical knowledge is very complex and abstract, and most students are unable to effectively understand and master it during the learning process. So it is even more important to fully stimulate students' interest in learning. This article analyzes the significance and current situation of stimulating students' learning interest in university mathematics teaching, and conducts effective strategy analysis. In order to effectively awaken students' desire for knowledge, guide students to change from passive learning to active learning, so that students can continue to grow and progress in this process.

Keywords: College Mathematics Teaching; Learning Interest; Measure

Introduction

Those who know are not as good as those who are good, and those who are good are not as good as those who are happy. Interest is the best teacher, and with it, one can gain knowledge and learn. Teachers should pay attention to the importance of stimulating students' learning interest in college mathematics during the teaching process, fully analyze the current learning situation and development direction of students, and formulate targeted and effective teaching measures. Conduct effective situational introduction, optimize teaching content, and enrich teaching forms. During this process, fully enhance students' interest in learning and guide them to actively engage in knowledge learning.

1. The significance of stimulating students' interest in learning in college mathematics teaching

Students' interest in learning is an important psychological tendency for them to learn selectively, actively, and happily. Interest is the most realistic and active component of learning motivation, which is the driving force for students to engage in autonomous learning and plays a certain role in promoting their knowledge learning. Only when students develop an interest in relevant knowledge during the learning process can they actively listen with interest, actively explore and think about knowledge, and thus learn more knowledge and information. In traditional teaching processes, teachers are often the main focus, and they blindly guide knowledge during the teaching process. The reason for this manifestation is also a lack of trust among teachers towards students' autonomous learning. With the continuous implementation of quality education, there have been significant changes in some teaching concepts and models in the teaching process. It is required that in the teaching process of the university stage, not only basic knowledge should be imparted to students, but also various abilities and qualities should be cultivated. Einstein once said, "Interest is the best teacher, which can stimulate people's creative enthusiasm, curiosity, and thirst for knowledge." Many educators can view teaching as a process of cultivating interest, believing that only by infiltrating teaching into students' interests and desires can the best teaching effect be achieved, achieving high-quality teaching, and cultivating high-quality talents. At present, college students have many advantages and highlights. But they lack a certain interest in learning. In the process of learning knowledge, one cannot arouse interest and follow the guidance of teachers to explore knowledge. Especially since mathematical knowledge is relatively abstract, students are less interested in learning knowledge. Therefore, stimulating students' interest in learning in college mathematics teaching can fully and effectively

promote students' understanding and learning of knowledge.

2. Measures to stimulate students' interest in learning in college mathematics teaching

2.1 Create scenario import

In college mathematics teaching, to stimulate students' interest in learning, one can use scenario introduction to stimulate their interest. At present, students are not interested in mathematical knowledge during their college years. Some teaching methods of teachers also have a weak guiding effect on students. So teachers can combine the mathematical knowledge in textbooks, combine daily life, and explore mathematical knowledge from some small things in daily life, creating an interesting teaching environment for students. After students become interested in these teaching scenarios, they will actively participate in it to gain knowledge. During the process of understanding, they will be guided by the teacher and develop interest in relevant knowledge. Then, they can understand and learn knowledge through their interest, and apply it. For example, in the process of teaching complex and advanced computational methods, teachers can combine these mathematical calculation knowledge with some phenomena in daily life, integrate knowledge and information, and write an interesting question to guide students to analyze the interesting question. By guiding students to explore and learn knowledge through these interesting questions, students can learn with interest and improve their literacy in various aspects. For example, in the process of guiding students to learn about constants and variables, teachers guide their interest through a small example that students can understand and accept: Xiaomi's age is 17 years old last year, 18 years old this year, and 19 years old next year. Age: The values of 17, 18, and 19 are constantly changing. So from this, it can be seen that age is a variable and constants are 17, 18, 19, etc. The teacher fully stimulated students' interest in this process and guided them to understand some knowledge of constants and variables in university mathematics. A constant usually refers to a fixed value, such as 1, 2, 3, a , b , true, false, hello World, etc. In the Java language, the keyword `final` is mainly used to define a constant. Once a constant is initialized, its value cannot be changed again. In order to better distinguish and express, 1, 2, 3, a , b , true, false, hello World, etc. are generally referred to as literal constants, while `PI` and others modified with `final` are referred to as symbolic constants (character constants). Variables come from mathematics, which can store calculation results or represent abstract concepts of values in Computer language. Variables can be accessed through variable names. In directive languages, variables are usually variable; But in Pure function languages (such as Haskell), variables may be immutable. During this process, teachers guide students to develop interest in relevant mathematical knowledge through small situational approaches. Students can be guided by their interests and then explore and learn knowledge. Through this process, students can learn more useful mathematical knowledge.

2.2 Optimize teaching content

In the process of university mathematics teaching, in order to effectively stimulate students' interest in learning, it is necessary to continuously optimize the teaching content. The knowledge in the mathematics teaching materials during the university stage is unified and rigid. After opening the book, students will be filled with dense Mathematical notation and numbers. When students see these dense numbers and Mathematical notation, they will lose interest in these knowledge instantly. Teachers can simplify these seemingly complex mathematical knowledge and summarize it through some mind maps or flow charts. Continuously optimize the teaching content and transform complex teaching content into forms that students can easily understand and accept, in order to convey to students. After students come into contact with these optimized and simplified teaching content. In the process of understanding mathematical knowledge and information, students will become simpler, become interested in these interesting processes, and actively follow the guidance of teachers to explore and learn knowledge. If we want to teach students some application of Further Mathematics, we can show students some ways of using Further Mathematics in daily life, and guide students to understand knowledge effectively. Develop interest in relevant knowledge. In this process, it is also possible to cultivate students' core mathematical literacy, cultivate their mathematical innovation ability, and lay a solid foundation for their growth and development. For example, in the process of guiding students to learn Elementary function, teachers classify basic Elementary function as: Exponential function, logarithmic function, Power function, Trigonometric functions, Inverse trigonometric functions, etc. During this process, teachers use information technology to present the symbols, graphs, properties, etc. of these functions to students through mind maps. During this process,

students can develop interest in the knowledge presented by the mind maps, and then explore and learn knowledge guided by their interests.

2.3 Enrich teaching methods

In the process of university mathematics teaching, it is very important to enrich the teaching methods in order to effectively stimulate students' interest in learning. There are certain differences between teachers in the university stage and those in other stages. The main task of teachers in the university stage is to impart knowledge to students and guide them to continuously grow and progress in this process. However, many teachers' teaching methods in this process are too single and lack innovation. In addition, many mathematics teachers in universities have outdated thinking and have long used a teaching method. They have gained some familiarity with this teaching method and believe that it is the most suitable teaching method for students. In fact, this is a manifestation of the teacher's lack of progress in thinking. To effectively guide students to develop interest in knowledge, innovation is definitely necessary in the use of teaching methods. Innovation arises from a teaching method that students are interested in and easily accept, guiding them to explore and learn knowledge through these teaching methods. Students can fully grow and progress in this process, and can also explore more knowledge from mathematical knowledge. For example, when guiding students to learn the knowledge point of the limit of a sequence, teachers can fully stimulate students' interest in learning through some basic mathematical exercises. In this process, students watch the teacher's demonstration of an exercise of "approximately finding the area of a circle by making a circle inscribed with a Regular polygon" on the big screen. At the same time, it can also guide students to watch some ancient Chinese mathematician Liu Hui's circular cutting technique. Through these examples, students can fully stimulate their interest in learning. Once they develop an interest in relevant knowledge, they can follow the teacher to explore and learn knowledge. During this process, teachers can consolidate more knowledge for students through some exercises. During this process, students have a certain interest in mathematical knowledge during their college years, which can continuously enrich their knowledge and lay a solid foundation for their growth and development.

Conclusion

In summary, in the process of university mathematics teaching, teachers should attach importance to stimulating students' interest in learning. Be good at discovering students' strengths and interests during the teaching process, and provide targeted guidance during the teaching process. Guide students to be interested in students in this way. Guide college students to be interested in knowledge, to better explore knowledge, and to master more knowledge and skills. During this process, students can also understand some principles, clarify their future development direction, move in the right direction, and achieve success.

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Use Digital Technology to Explore the Influence and Suggestions of College Music Education in Basic Education

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Abstract: In recent years, science and technology have continued to develop and progress, and the level of teaching digitalization has improved. Music education occupies an important position in many universities, and it is necessary and feasible to use digital technology to explore its impact in basic education. The digitalization and technology of music education in colleges and universities have had a positive impact on basic education, such as balancing educational resources, updating education models, optimizing teaching platforms, and practicing student-oriented concepts. In order to maximize the role of digital technology, it can be innovated and applied from sight-singing ear training teaching, orchestration course teaching, and polyphonic course teaching.

Keywords: Digital Technology; College Music Education; Basic Education; Effect; Suggestion

Introduction

Digital technology has played a positive role in many industries and fields, and the application experience in college music education and its basic education has become richer, laying a foundation for specific practical work. The overall level of music education in colleges and universities is constantly improving, thanks to the role and value of digital technology in the integration and utilization of resources. The use of digital technology to explore music education in colleges and universities can create favorable conditions for the improvement of the quality and efficiency of basic education, and can also promote the enhancement of educational fairness and promote the development and progress of China's education system.

1. Use digital technology to explore the impact analysis of college music education in basic education

1.1 Balance educational resources

Digital technology explores the role of college music education in basic education, among which balanced educational resources are the most prominent. The traditional music teaching mode is more to teach students theoretical knowledge, students have fewer opportunities for practical application, and it is difficult to develop their own knowledge and understanding of music art. China's examination-oriented education system occupies an absolute position in the entire education system, and the development of music education in many colleges and universities is still inseparable from the negative impact of examination-oriented education, and there are obviously big problems in specific educational activities. When digital technology is applied to music education in colleges and universities and has an impact on basic education, the balance of music education resources begins to be effectively improved. Digital technology allows more diversified and richer information and materials to be obtained on the online platform, and practice under the guidance of teachers to learn digital audio and video software. Intuitively understand musical knowledge ^[1].

1.2 Update the education model

Digital technology has accumulated a lot of experience in the process of exploring music education in colleges and universities, which has promoted the renewal and development of basic education models. The educational concept of music teachers in colleges and universities has been updated under the role of digital technology, and more and more teachers have begun to explore more

interesting and effective educational methods, analyzing the nature and characteristics of basic education, and forming many teaching methods that can mobilize students' enthusiasm for classroom participation and cultivate students' ability to expand and extend their thinking ability. Music education itself needs to form a good interactive relationship with students, and updating the education model can improve the traditional education concept, so that students and teachers can communicate and communicate on an equal footing, and maintain enthusiasm and exploration spirit for music knowledge. In the process of using digital technology, teachers can also obtain timely feedback from students, so as to further optimize teaching content and teaching methods.

1.3 Optimize the teaching platform

Digital technology has created favorable conditions for education work, and now there have been many high-quality education platforms and teaching platforms, and teachers can apply them scientifically and reasonably, which can make the impact of digital technology exploring music education in colleges and universities more obvious on basic education. Music art has a certain positive impact on people's production and life, innovation and optimization of teaching platform, in line with the nature and characteristics of basic education, that is, to meet more people's pursuit and learning of music art. Music courses themselves are difficult, and can be effectively disseminated through the teaching platform, so that more students can find learning resources that meet their needs, and teachers who can understand more thoroughly and comprehensively. The teaching platform built by digital technology allows students to intuitively feel the pitch, timbre, rhythm and speed of sound, etc., which promotes students' aesthetic experience to be richer^[2].

2. Practice the concept of life

College music teachers need to understand and understand students from different angles and levels, so as to use digital technology to develop diversified and diversified teaching programs for students, and help every student enter the world of music art, acquire music theory knowledge and master music skills. College music teachers need to start from many aspects to practice the student-oriented concept, that is, to understand the students' music level through the test, and subdivide the test link in order to form an objective conclusion and formulate a teaching plan based on this. Students can feel valued in this teaching mode, so as to learn from each other's strengths and achieve more obvious growth under the guidance of teachers.

Second, use digital technology to explore the suggestions of college music education in basic education

2.1 Sight-singing ear training teaching

Digital technology in ear training can play a positive role in promoting students' immersive learning experience. Digital technology can prompt teachers to create digital music teaching models, construct digital technology teaching paths, continuously integrate advanced teaching concepts and teaching content, create a good classroom atmosphere, and let every student experience the charm of music art. Sight singing ear training teaching is relatively difficult, some content requires students to have a solid foundation, teachers should timely use Cakewalk Sonar and other software to guide students into different classroom teaching modes, cultivate students' practical training awareness. Students can also use digital software to record music, adapt or create music under the guidance of teachers. In such a teaching mode, students can enhance both auditory thinking and aesthetic ability.

2.2 Teaching aspects of orchestration courses

Orchestration courses are one of the important courses of music education in colleges and universities, and the use of digital technology to explore them can form a positive role in promoting basic education. Compared with other courses, the orchestration course is more difficult to teach, and it is necessary to fully respect the main position of students, cultivate students' innovative spirit, and enhance students' creativity. The use of digital technology can break the traditional teaching situation, prompt teachers to master advanced digital teaching software in advance, and build interesting and vivid classrooms based on course content, so as to avoid the negative impact of limited teaching conditions on teaching results. Digital technology itself is not attractive to most students, and when it becomes music teaching software or music production software, students' interest will arise. For example, teachers can use starC, a music software, to carry out orchestration course teaching activities, allowing students to deploy and apply it by themselves to construct a unique knowledge system ^[3].

2.3 Polyphonic course teaching

The continuous development and progress of the education industry has benefited from the use of digital technology. In this

context, the level of university education has improved, and many teachers and students have begun to explore more possibilities for musical art innovation. Polyphonic courses have an important position in college music teaching like orchestration courses, in line with the development and changes of digital technology, to change the idea of music talent training, it is necessary to optimize and improve the content and teaching methods of polyphonic courses, so that teachers highlight the importance of dynamic teaching, increase the specificity and image of music teaching, ensure that students can deeply and comprehensively understand and recognize music art, and have a positive impact on students' career development. In the teaching of polyphonic courses, teachers can also enrich the teaching mode with the help of digital technology software, build innovative music teaching classrooms, and provide students with a good learning space.

3. Conclusion

In summary, digital technology explores the influence of college education in basic education, and paying attention to it can find the direction of basic education development as soon as possible. College music education itself has been positively affected by digital technology, showing a new development trend, and creating favorable conditions for the improvement of the basic education system. The combination of practical teaching and theoretical teaching has significantly reduced the difficulty after the application of digital technology, and has provided more targeted and specific educational resources for more students, laying a solid foundation for the healthy and orderly development of China's education cause.

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Investigation on the Quality of Life of Primary School Students

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Abstract: This paper investigates and studies the quality of life of primary school students, and the results show that the quality of life of primary school students in Chongchuan District of Nantong is generally at the upper middle level, and it shows a downward trend with age. There were significant differences between 8-year-old boys and girls in “teacher-student relationship”, “learning ability and attitude”, “self-concept relationship”, “peer relationship” and “homework attitude”, and girls were better than boys. There were significant differences between 10-year-old boys and girls in the scores of “teacher-student relationship” and “self-satisfaction relationship”, and girls were better than boys; There were significant differences between 11-year-old boys and girls in the two factors of “activity opportunity” and “athletic ability”, and boys were better than girls. There was no difference in the remaining ages by factor. Improving the quality of life of primary school students requires the active cooperation of schools, teachers and parents, as well as special attention to the differences between boys and girls aged 8, 10 and 11.

Keywords: Quality of Life; Primary School Student; Investigation

Introduction

As the mainstay of a country’s future, the quality of life of primary school students directly affects their own growth and development. In order to understand the quality of life of primary school students in Chongchuan District, Nantong, it provides a reference for local primary schools to formulate nutrition and health construction, and promotes the all-round development of primary school students. This paper investigates and studies the current situation of the quality of life of primary school students in Chongchuan District, Nantong.

1. Objects and methods

1.1 Object

The whole group stratified sampling method was used to conduct a quality of life questionnaire survey on primary school students in Chongchuan District, Nantong, and a total of 653 questionnaires were distributed through questionnaire stars, and 621 valid questionnaires were recovered, with an effective rate of 95.09%. Among them, 314 (50.56%) were male and 307 (49.44%) were female.

1.2 Method

The questionnaire adopts the National Standard GB/T 31178-2014 *Quality of Life of Children and Adolescents* officially issued by the National Health and Family Planning Commission of the People’s Republic of Chinese China and the Standardization Administration of the People’s Republic of China, which is applicable to the quality of life survey of children and adolescents aged 7~18. SPSS26.0 software was used to perform statistical analysis of survey data.

2. Results

2.1 Comparison of the quality of life of primary school students with the national norm

The quality of life of primary school students in Chongchuan District of Nantong is generally at the upper middle level, and the

quality of life of primary school students is declining with age. The quality of life of boys aged 7, 8 and 10 years is lower than the national norm, and the quality of life of boys aged 9 and 11-13 is higher than the national norm; Girls are also in the younger age group of 7-9 years old, and their quality of life is lower than the national norm, and the rest of the ages are higher than the national norm. See Figure 1.

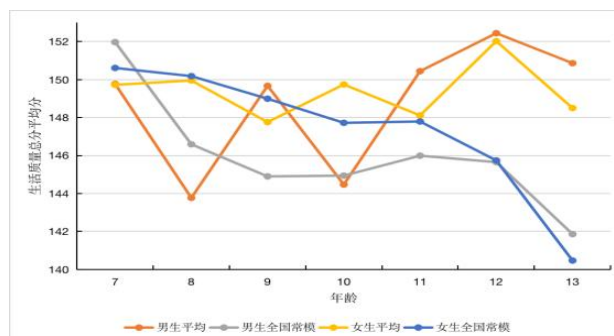


Fig. 1. Line chart comparing the average total quality of life score with the national norm

2.2 Comparison of gender differences of factors in the quality of life dimension of primary school students of different ages

Quality of life contains four dimensions: “psychosocial function”, “physical mental health”, “living environment” and “quality of life satisfaction”, and each dimension has multiple factors. Taking gender as the overall identification variable, the t-test was performed on the scores of each factor of each dimension of different ages, and the differences of each factor of different sexes were compared, and the results showed that there were obvious differences in the factors listed in Table 1, and there was no difference between the sexes of the other age factors.

The psychosocial function includes five factors: teacher-student relationship, parent-child relationship, learning ability and attitude, self-concept relationship, and peer relationship. The comparison found that 8-year-old boys and girls scored significantly differently in “teacher-student relationship”, “learning ability and attitude”, “self-concept relationship” and “peer relationship”, while 10-year-old boys and girls scored significantly differently in “teacher-student relationship”. In terms of “teacher-student relationship”, combined with standard deviation analysis, it is seen that the teacher-student relationship of girls is significantly better than that of boys, which is inseparable from the fact that girls are more sensitive to emotional perception than boys, Ma Xiaoqian and other scholars found that the relationship between teachers and students affects the habit formation and social-emotional function of primary school students, so teachers should lead by example and set a good example for students. There were differences between 8-year-old boys and girls in the quality of life scores of “learning ability and attitude”, “self-concept relationship” and “peer relationship”, and girls were higher than boys, which may be inseparable from the growth and development of girls ahead of boys in childhood. There was no difference in the age of “parent-child relationship”, indicating that parents had no significant impact on the quality of life of children of different genders.

Physical and mental health includes three factors: “somatic feelings”, “negative emotions” and “work attitude”. Except for 8-year-old boys and girls, the P value of “work attitude” was less than 0.05, and the rest of the factors did not differ by age. From the average difference, it can be seen that girls’ homework attitude is better than boys, and the difference between boys and girls in homework attitude is the difference between social maturity from a psychological point of view, so girls will be more active than boys, and the stability of attention is higher than that of boys. Lower grade boys will be more playful, so the difference will be more significant.

The living environment includes three factors: “convenience of living”, “activity opportunity” and “athletic ability”. There were significant differences between the two factors of “activity opportunity” and “exercise ability” for 11-year-old boys and girls, and there was no difference in the other ages. In terms of mean difference, boys in all age groups were better than girls in the two factors of “activity chance” and “exercise ability” or there was little difference between the two. Thomas research showed that boys performed better than girls on five test tasks: grip strength, sprinting, long-distance running, round-trip running, and sit-ups.

Quality of life satisfaction includes two secondary indicators: “self-satisfaction relationship” and “other”.

After the t-test, it can be seen that there is a significant difference in the “self-satisfaction relationship” between 10-year-old boys and girls, and the satisfaction of girls is higher than that of boys.

Table 1. Comparison of the psychosocial dimensions of men and women

First-level dimensions	Secondary factor	Age	Gender	N	Mean	Standard deviation	Mean difference	<i>t</i>	<i>P-value</i>
Psychosocial functioning	Teacher-student relationship	8	Male	63	15.1	2.59	-1.08	-2.381	0.019
			Female	60	16.18	2.47			
		10	Male	55	14.64	2.58	-1.08	-2.17	0.032
			Female	54	15.72	2.64			
	Learning ability and attitude	8	Male	63	7.54	1.48	-0.99	-3.572	0.001
			Female	60	8.53	1.6			
		8	Male	63	9.89	2.18	-1.39	-3.516	0.001
			Female	60	11.28	2.22			
	Peer relationships	8	Male	63	14.1	2.51	-0.97	-2.043	0.043
			Female	60	15.07	2.75			
Physical and mental health	Homework attitude	8	Male	63	8.05	1.61	-0.63	-2.099	0.038
			Female	60	8.68	1.74			
Living environment	Opportunistic activities	11	Male	45	8.07	1.56	0.7	2.027	0.046
			female	47	7.36	1.77			
	Athletic relationships	11	Male	45	8.36	1.98	0.82	2.141	0.035
			Female	47	7.53	1.69			
Quality of life satisfaction	Self-satisfaction relationships	10	Male	55	18.51	2.51	-1.1	-2.074	0.041
			Female	54	19.61	3.01			

3. Discussion

From the results of this survey and study, the quality of life of primary school students in Chongchuan District of Nantong is generally good compared with the national norm, and there are some problems that need to be intervened as soon as possible, and the intervention strategy should comprehensively consider the intrinsic relationship between various dimensions, among which the three age groups of 8 years, 10 years old and 11 years old have different gender differences, which need to be paid attention to. It is recommended that intervention can be done in the following three areas.

From the perspective of schools, teachers are first required to strengthen the interaction, communication and trust between teachers and students, so that students can build more self-confidence and promote personality development when they are in the stage of social self-expression. Secondly, schools should work with teachers to start from hobbies and interests, and use painting, music, film and other art forms in multiple dimensions to enhance students' enthusiasm for learning, change students' learning attitude and homework attitude, and let them understand that reading can be displayed in many forms. Finally, schools should encourage students to actively participate in physical exercise, and can carry out more sports-themed activities, class meetings, second classes, etc., to strengthen students' physical fitness and reduce the impact of overweight and obesity.

For teachers, they should implement a teaching method based on praise and encouragement, improve the relationship with students, face each lesson with a smile and optimism, convey positive energy from the spiritual level, and actively communicate with students as friends, understand students' strengths and weaknesses, teach according to aptitude, adjust teaching methods and progress appropriately, and let students feel the relaxed atmosphere in the classroom. In the face of younger students, we should give full play to their dependence on teachers, cultivate feelings, and lay the foundation for future relationships. It is also necessary to promote students' judgment of their own importance in different aspects through the merits of each person, which can not only enhance the sense of collective honor, but also make the peer relationship more harmonious and gain more friends.

The family is the basic unit that constitutes society, the cell and microcosm of society. Family education is of great value to the healthy development of primary school students. First of all, parents should establish a correct view of family education, build a good parent-child relationship, and respect the main position of children in after-school life. It is necessary for parents to seize the opportunity to guide children to establish correct values, enhance children's interest in learning, correct children's awareness prejudices and behavioral deviations in after-school life in multiple ways, and improve children's comprehensive quality to improve children's self-confidence. Secondly, parents should set an example for their children, take the initiative to learn knowledge, improve their self-cultivation, and create a healthy and beneficial family leisure environment. Finally, parents can improve their children's convenience and enthusiasm for life within their own conditions, encourage their children to make more friends, and enhance their happiness.

Only by working together, teachers and families working together, fully integrating resources and forming a virtuous circle of mutual cooperation can we better improve the quality of life of primary school students and make them grow up healthier and happier.

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How to Cultivate Students' Interest in Studying English

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Abstract: In modern society, English, as an important language, is an indispensable tool for people to communicate and exchange. However, learning English is not limited to knowledge points, grammar and other aspects. With the development and progress of the times and the rapid improvement of the level of science and technology, the problem of how to cultivate students' interests has become increasingly prominent. Interest is the best teacher to learn, and it is also the most effective, direct and lasting way for students to learn English well and improve their level and ability. Cultivating good teaching habits can help us master knowledge and skills better. Starting from the importance of students' interest in learning, this paper discusses how to stimulate students' interest in learning and find the correct teaching methods in order to help students have a strong interest in English learning in class and help them acquire knowledge actively.

Keywords: English; Students; Interest in Learning; Tactics

Introduction

The thesis discusses the importance of interest and what I have done to cultivate students' learning interests. The following aspects are involved: The importance of interest in learning, let students make clear their main part in language learning and give them enough opportunities to demonstrate, how to help them keep the interest long, build up a more harmonious relationship between students and teachers.

Interest is the most active element in studying English and it is also the effective stimulant to study. Interest can push forward people to learn and act actively, and surely interest is a decisive factor, which influences one's motivation, attitude and perseverance^[1]. Einstein once said: Interest is the best teacher. Interesting things will never make people feel bored, but make them work hard and persevering until they succeed. Interest is people's source power of learning. So it is important in learning English. If students accept education in joy, they will want to learn instead of being asked to learn. They will release from boring knowledge teaching and mechanical reciting, the effects of learning will be much better. In this essay, how to cultivate the students' interest in studying English will be discussed.

1. The importance of interest in learning

Interest is the state of wanting to learn or know and it is also the power to hold one's concern or curiosity. According to the theory of intrinsic motivation, it is an innate impulse to show one's ability and self-confidence. And in the view of the theory of ego efficiency, it is derived from the feeling of satisfaction to achieve some showings, while in the theory of expectation value; it refers to the fascination of the tasks to be completed to the learner. We learn from all these definitions that interest plays an important role in learning^[2]. Confucius, the great educationalist of ancient China, once pointed out: "The man who knows it is not as good as the man who likes it; the man who likes it is not as good as the man who takes delight in it". Where the heart is willing, it will find a thousand ways, but where it is unwilling it will find a thousand excuses. The main task of a teacher is in every possible way leading the students into the most enjoyable stage. Interest is also a spirit in studying English. So the teacher should use all kinds of ways to arouse the students' interest in studying English.

2. Let students play the main part in English learning and arouse their learning interest

2.1 Let students make clear their main place

In the traditional English teaching, teachers play dominant roles in the teaching process. They do not care about their audiences' feelings. The students have to be compelled to get the knowledge from their teacher whether they are willing or not. so the teaching result isn't good enough and they can't learn by themselves. When they have problems, they don't know what to do. They can't solve the problems by themselves. So the roles should be changed. The teacher should be a guide but a leader, the students shouldn't not only be the audiences but also the participants in the teaching process. *Teachers should allow students to become masters of learning activities*^[3].

English can not be taught, it must be learned. We can't learn English well only with teachers' teaching. Students must cooperate with others under teachers' guide, try to understand, remember and get more knowledge. So, practice is the most important. Knowing their position, students will feel they are the owners of the study, and then produce study motive, it means they have had study interest. If interest in learning is aroused, the dominant position of students will be fully reflected, The study effect is also more obvious. This is a benign circulation.

2.2 Give them enough chances to speak and act

After students can speak some simple sentences, I teach them to do duty report. Students do it every day one by one. At the beginning, the report can be very easy, several sentences are OK. One month later, I let them do the harder report. All kinds of reports are included. For example, self-introduction, introducing others, retelling things, describing things, telling stories. In all, students use the simple expressions to complete the report. Then I will ask some questions according to the report. Students answer the questions actively. During the answering, I will seize the opportunity to encourage them timely. Surely, I will allow each student to speak. The second half of Grade Seven, students have a certain amount of language ability, I will let them to ask questions and others will answer them actively. In this way, the enthusiasm of the students will be mobilized, this class has a good start. Besides, in the teaching process, according to the content need, I offer the opportunities for them to act the conversations and the scene plays, play games, hold competitions and so on. This form of the class, not only activate classroom atmosphere and, more importantly, mobilize the enthusiasm of students to enable them to learn in high spirits among the input, rather than passively listen to boring lectures, teaching and learning effect can be imagined^[4].

3. How to keep their interests long

3.1 Encourage student in time, help them to get over the difficulties and help students to build up confidence

In the path of learning English, in addition to flowers and applause, there are going to be thorns and frustrations. Flowers and applause will encourage students to study harder and arouse the immense interest of students. Once they come across bumpiness, some students immediately cool the passion, the learning does not progress, it will decline. .At this time, I will have a talk with these students, tell them the road of acquiring knowledge is long and the learning process will encounter difficulties, we need to face up to them, strengthen our confidence and find ways to solve them, not to retreat. Where there is a will there is a way. It is true that every student is eager to make progress in his study. Once the progress has been made, even very limited, he will have the sense of achievements^[5]. As a result, he is full of interest, and makes still further progress. It is important for teachers to help students to keep such senses. At any time when a student fails in the examination, a teacher shouldn't criticize him hastily. The teacher should encourage the student to study diligently again and get good marks next time. When the student makes progress, the teacher should praise him in time to build up his confidence. Getting the praise from the teacher is a great joy and success to the students, especially to the bottom students. Joy coming from success is a sort of tremendous force. Without this kind of force, any measures are of no use, because failure will make the students produce pessimism, disappointment and crestfallen moods which will influence their interest in study. Therefore the teacher should use every possible way to help the students to build up confidence.

3.2 Learning contents should proceed step by step

The course content must suit student's actual level, should fit the majority students. If the course content has surpassed student's actual level, student's study interest will vanish gradually, the polarization can be getting more and more serious. The teaching material content is from the shallow to the deep, the student also wants to obtain the knowledge in an orderly way. Along with difficulty increase, needs the student to overcome difficulties by the strong will, the teacher must understand the students' study situation, helps them to be clear about the goal, firm confidence and make another progress.

3.3 Teach them correct learning methods in order to help them avoid taking circuitous road

Interest is very important. But you can't learn English well only with interest. The students must master the sciential study methods, had the strong study interest to learn English. In teaching, I have done so.

Explaining the word, I use body language and gestures. Such as in teaching these action words--run, write, think, read, go, come, leave, I use the actions to demonstrate. Students can guess the meaning, then remember the words easily. Actions are useful in teaching pronunciation. The teacher demonstrates how to make the sound by his movements of the speech organs, such as, mouth shapes, tongue movements and states of muscles, etc, and uses a hand to show the stressed syllable of a word or to beat the time while practicing rhyme, and uses a hand to gesture the fall and rise of the voices. The clever use of body language can play an effective role.

Sometimes, I use the songs to teach grammar. In some students' opinion, the grammar is very hard. Songs offer a change from routine classroom activities. They can be used to teach a variety of language items such as sentence patterns, vocabulary, pronunciation, rhythm, adjectives, and adverbs. Learning English through songs also provides a free atmosphere for the students.

Teaching methods should be diversified, can not be repeated. In the teaching process, I use all kinds of forms to arouse the students' enthusiasm. Such as making dialogues, role-play, story-telling, changing dialogue into description, changing description into dialogue, writing group words into a sentence, writing sentences into an article. In this way, they will have opportunity to work together, help each other and learn from each other.

Conclusion

In fact, English teaching on the basis of interest is the most efficient. Interest can make students acquire knowledge actively and cultivate their independence in studying English. Teachers should pay much attention to the interest in the process of teaching.

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A Test of Taoist Thought in The Mirror's Edge of Flowers

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Abstract: As a masterpiece of ancient mythological stories, The Mirror's Fate contains rich and complex religious connotations, but the study of the religious and cultural thoughts of The Mirror's Fate is still thin. This paper intends to start from the aspect of Taoist cultural thought, through the analysis of Li Ruzhen's theory of creative mind, to discuss the theme of Mirror Flower Fate, the plot structure of the novel as well as the novel's characters, in order to deepen the understanding of the cultural meaning of the novel.

Keywords: Mirror Flower Fringe; Creative Mind; Taoist Thought

Introduction

Li Ruzhen's name is Songshi Taoist, in the book "The Mirror's Fate", the author has repeatedly called himself "the descendant of Laozi", and it is rumored that this book was taught to him by the Taoist immortal ape, which tells us that "The Mirror's Fate" has a lot of origins with Taoism. "Mirror Flower Fate" mainly narrates the story of Tang Quchen, the fairy of a hundred flowers, and Qunfang, who was relegated to the red earth, went through the trials and tribulations of the mortal world, and passed the high school talent in the women's examination, and finally returned to the origin after the expiration of the earthly destiny. From this, we can see the influence of Taoism's parent theme of "banishing the immortals to cultivate the Way", and the structure of the novel also reflects Taoism's cyclic theory of karma and the unity of heaven and mankind. In addition, from the point of view of Tang Ao's travels and eventual return to Little Penglai, as well as Tang Quchen's search for his father to go to Little Penglai and the characters portrayed, Taoism's "cultivation of Taoism" has been strongly emphasized in The Mirror's Edge.

1. Li Ruzhen's Creative Mentality

1.1 Self-allegorical Creation

As a whole, "The Edge of Mirror Flowers" should be Li Ruzhen's self-allegorical novel. When Li Ruzhen was a teenager, he studied under Ling Tingkan, learning ancient rituals, music and rhythm, calendars, territorial history and other knowledge, and he was very interested in territorial history. In addition, Li Ruzhen had settled in Haizhou with his brother when he was young, and "The Mirror's Edge of Flowers" is a classical masterpiece written by the author on the basis of the local customs, local slang and monuments and historical records in the ancient Haizhou area. The novel involves more than thirty countries, and takes the readers to enjoy the strange people and customs of the Black Tooth Country, the Two Faces Country, and the Dog Fen Country, etc. It shows the author's rich knowledge of overseas territories in an all-round way, and marvelously sketches out a splendid and colorful map of the heavenly wheel.

In the latter fifty pages of the novel, through the depiction of Tang Buchen, the daughter of Tang Ao, and the reincarnated women of the Flower Fairies who took the women's examination together, and the description of various scenes such as books, paintings, zither, chess, poems, rhymes, and all kinds of wine orders, the book shows their profound and rich talents in poetry, lyrics and rhymes, music, and chess, etc. Mr. Lu Xun regarded the book as the most important book in the world. Therefore, Mr. Lu Xun regarded this book as a "work of knowledge" among the "scholars who see talent in novels".^[1]

1.2 The complex of merit and the watery moon in the mirror

The imperial examination system went through the North and South Dynasties, the Sui Dynasty, until it took shape in the Tang

Dynasty, when the monopoly politics based on the bloodline clan relationship began to change the hiring system. "The scholarly people from all walks of life were more willing to prove their abilities and realize their achievements and political ambitions through the imperial examination system. Li Ruzhen is no exception. But Li Ruzhen on the one hand, with the desire of the readers of the pursuit of fame, on the one hand, and because of their own disdain for the eight-legged text, the character is not good at camping, to the middle-aged tired to find no hope of getting an official, it is dedicated to study. Therefore, in the *Mirror's Edge of Flowers*, Tang Ao sought hard for fame, "repeatedly went to the test, but still a green shirt", and then finally by talent, "even won the scouting flower", but because he had been with Xu Jingye for the sworn brother and was demoted by Wu Zetian as a scholar, after Tang Ao then have After Tang Ao had the intention of "abandoning the red world". However, Tang Ao later retired to Little Penglai, but let his daughter, Tang Xiaoshan, renamed Tang Quchen, to participate in the women's examination. Tang Ao has already left the red world, but he is still obsessed with the idea of merit. This is the author's way of using the character of Tang Ao to express the conflict between his own hard-to-use complex of merit and his transcendent freedom to enter the world.

Xu Xiangling wrote in the explanation of "Mirror Flower Edge": "'Mirror Flower Edge', the color is empty, karma is fixed"; ^[2] "Mirror Flower Edge" uses the female test to express the author's self-comfort in the disillusionment of the complex of merit and fame, fame and fortune are like the mirror flower and the moon in the water, the empty, impermanent and It is like the moon and the mirror, impermanent and fleeting.

2. Reflection of Taoist Thought in The Edge of Mirror Flowers

2.1 The Novel Structure of Cyclic Return

The Huainanzi - Original Taoist Discipline pointed out earlier: "Heaven is invisible, and the ancestor of things is also invisible. Therefore, there is born of nothing, the real out of the virtual, the Taoist a stand and all things are born." ^[3] can be seen, "Road" is the origin of all things, the law of nature. Taoist belief "Avenue invisible, fertility of heaven and earth", the Road constitutes the existence of all things, and make the formation of a profit and loss are the law of the cycle of regression type system. This is reflected in the novel *Mirror Flower Fate*, which is a warning of the back and forth between the immortal and mortal worlds and the hidden words of the immortal machine in the text.

The opening of *Mirror Flower Rim* reads: "Although the narrative is nearly trivial, the end of the song is to be returned to the right, and obscene words are not recorded. Which is strange and fantastic, all by the group Fang was banished to send its end." ^[4] This prophecy for the main line of the novel buried ambush. The main character, Tang Quchen, is the mortal body of the Hundred Flowers Fairy, who was banished to the red dust due to her faults, and then went through trials and tribulations with Qunfang, and ultimately followed her father into the Tao of Little Penglai, returning to the original immortal. The ultimate goal of Taoist belief is that people can finally realize the return to their roots and become immortal through virtue cultivation. Therefore, from beginning to end, the novel presents the cyclic structure of "Tao (Immortal) - Everything (Mortal) - Tao (Immortal)" and the mode of returning to immortality. At the same time, there are a large number of hidden phrases in the text that echo with the previous and later chapters to promote the development of the novel's plot. In the fourth chapter of *Mirror Flower Edge*, it is written that Wu Zetian was drinking and composing poems, and was so excited that she urged all the flowers to open up, and the effect was not as good as expected, and Empress Wu was ashamed, and a small eunuch said, "About all the flower fairies still don't know that the Emperor is coming to enjoy the flowers..... If the Emperor himself gives another imperial decree, tomorrow all the flowers are going to blossom. to blossom tomorrow." Empress Wu listened to these words, seems to touch the past, and no trace. In fact, the Queen Wu is the original Star of the Heart Moon Fox Sifan was sent, and urge the original hundred flowers because of the Heart Moon Fox and Chang'e friendship, so intentionally make things difficult. In the 51st time, the Hundred Flowers Immortal Nun uses "Gathering Heads Mountain" and "Returning Heads Cave" to enlighten her, and then completes the transformation of the Hundred Flowers Immortal. This kind of hidden language in the novel is countless, and all kinds of coincidences and suspense are set up, combining the real and the imaginary, echoing back and forth, with a degree of relaxation, completing a kind of regressive cyclic structure, which is also a reflection of the cyclic theory of Taoism.

2.2 The Characterization of Mortal Immortals in Taoism

First of all, the character of Tang Ao best reflects the ideological proposition of "cultivating truth and seeking Taoism" in Taoism. Tang Ao and his daughter Tang Quchen is different, he is a mortal body, Tang Ao is quick-witted, but like to play in the mountains,

only the name of the show, and then with his father's legacy, the end of the scouting flowers, but by mistake, and was reduced to the show, and then traveled overseas to the small Penglai, a sudden sense of fame and fortune are empty, because of its previous service to the immortal grass, all the way to the construction of virtues, and then into the holy beyond the mortal world, the Taoist Xuexian. This is Tang Ao's double standard of spiritual cultivation and food cultivation, and also highlights the necessity of Taoism's "my destiny lies in me, not in heaven" and the mortal's idea of "cultivating virtue to become an immortal" through Tang Ao's self-behavioral norms and pursuit of the soul.

Secondly, the Hundred Flowers Fairy, who had been relegated to the mortal world due to her faults, was Tang Xiaoshan, the daughter of Tang Ao, who was later instructed by Taoism to rename Tang Xiaoshan as Tang Quchen. As the immortal soul of "Exiled Immortal Cultivation", the character image of Tang Boudoirchen highlights the temperament and character of the immortal family without any step. For example, the seventh chapter of the novel describes that when Tang Quchen was born, "the room was filled with a strange fragrance, neither ice musk, nor sandalwood moments change, and there were even a hundred kinds of aroma." This description of Tang Quchen's personal experience to give the legend of fairy fantasy color. Tang Quchen is alert and smart, versatile in both military and literature, with amazing talent, and in "The Mirror's Edge of Flowers", she has repeatedly reflected the special features of Tang Quchen, who was an immortal in her previous life. For example, in the 48th episode, Tang Quchen and Yin Ruohua both see a tablet recording the deeds of all the immortals at the Weeping Red Pavilion of the Little Penglai, but only Tang Quchen is able to read the tablet, which seems to be a self-taught skill, but is actually a unique feature of the body of an immortal. Taoism believes in gods and fairies, and Tang Quchen's search for her father through filial piety eventually led her to Little Penglai. It was precisely because of her loyalty and filial piety, and her devotion to Taoism, that she was able to bring the Hundred Flowers Immortals back to their origins and return to the world of the fairies.

Lastly, there are also more Taoist characters in the novel. For example, Yan Zi Vivian, the fairy of the Lingxiao Flower, is called "the warrior among women", and in the book, she also presents the image of a transcendent character who is "well versed in the art of swordsmanship at an early age and has long been familiar with the mysterious and mysterious opportunities". She fights for justice and saves people's lives, which is a typical Taoist immortal's embodiment of justice, reflecting the idea of Taoist immortals' cultivation to help the world. The Mirror's Edge of Flowers also embodies the profound connotation of Taoism through some negative characters. For example, in the eighty-eighth episode, Tang Quchen writes "The Fugue of the Heavenly Maiden Scattering Flowers", in which he expresses his ridicule of the "wind and moon", which alludes to Auntie Feng and Chang'e who are in confrontation with the Hundred Flowers Fairy, and "wind and moon", i.e., the wind and flowers and snow and moon, symbolizes the lust, and the novel's ridicule of the wind and moon is the projection of the Taoism's view of asceticism. The novel's mockery of the wind and moon is a projection of Taoism's ascetic view of cultivation.

As a novel in the middle and late Qing Dynasty, Mirror's Edge of Flowers has a great value for discussion and research in terms of its theme and content as well as its artistic ideas. The author writes about himself in a novel, satirizes the reality by imagining a fantasy ideal society, and carries out the Taoist ideology in it, writing that the reality and imagination are like flowers in a mirror and the moon in the water, which corresponds to the "nihilism" of the Taoism, and all is a vain hope.

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An Analysis of the Current Situation of the Application of Modern Educational Technology in English Teaching in Junior Middle Schools——Taking Jinhe Middle School in Genhe City as an Example

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Abstract: In contemporary English teaching in primary and secondary schools, good use of modern educational technology can greatly improve the efficiency of teachers' teaching and students' learning, especially during the epidemic period, the application of educational technology in teaching has become an indispensable topic. As the guider of students, teachers should have more mature modern education concepts, master various advanced teaching technologies, prevent the use of "formalism" in educational technology, and ensure that network resources can have a positive impact on students' learning efficiency and effect. This paper adopts the methods of field investigation, interview and literature analysis to investigate and study the current situation of the application of modern educational technology in English teaching in Jinhe Middle School in Genhe City, analyze the existing problems, and propose targeted solutions, in order to effectively apply modern educational technology in Jinhe Middle School and improve its English teaching efficiency and effect.

Keywords: Modern Educational Technology; English Teaching; Educational Concept

Introduction

Jinhe Middle School in Genhe City is a modern middle school with advanced information equipment. However, if these conditions closely combined with English teaching, the "bridge role" of teachers is vital, it can guide students to play their "subjective initiative", so that students can go beyond the "wall" of the school to learn English independently in the vast network world.

English teaching in middle school belongs to the basic stage of teaching, and there is not much "definitional" knowledge. The main purpose of English teaching is to enable students to master listening, speaking, reading and writing skills to a certain extent under the guidance of teachers, so as to cultivate students' interest in English and lay a good foundation for their future English learning.

In today's society, the use of various educational tools and educational systems has greatly improved the efficiency of education. If the teacher follows the traditional teaching method, explains the text on the book in a boring way, leads the students to read and recite the words, and does exercises mechanically after class, it may improve students' English scores in a short time. But it will easily make students lose interest in learning English, which is not conducive to their long-term development. For junior high school English teaching, it is essential to use multimedia, network and other information resources to carry out teaching activities and students' offline autonomous learning, which can improve learning efficiency to a certain extent.

1. A Survey of English Teaching in Jinhe Middle school

In the field survey of Jinhe Middle School in Genhe City, the questionnaire method is used to conduct a quantitative study on the use of some teaching equipment by the teachers and the students' views on these teaching equipment and the efficiency of online English teaching. The questionnaire includes selective questions and open-ended questions. The selective questions are presented in the form of tables. The survey results of 7 full-time English teachers and 53 students in the junior two year group of Jinhe Middle School are shown in the following table.

Table 1 The Use of Teaching Equipment by Teachers

Equipment name	Numbers of skilled users	Ratio of skilled users
projector	7	100%
Seewo whiteboard	2	28.5%

Table 2 The Most Popular Online Teaching Application (or Applet) for Teachers

Application (or Applet)	Numbers of Using
"homework applet" in QQ	7
took photos on WeChat	1
WeChat applet of "Early Bird English"	3
Tadpole English Selection	2

Table 3 The Research on Students' Attitude towards Multimedia Equipment

Student's attitude	Proportion
very helpful	53%
not much help	40%
no effect	7%

2. Problems in the Application of Modern Educational Technology

2.1 Teacher's Conservative Ideas

The application of modern educational technology in English classes requires that teachers must have the ability to operate the corresponding software and hardware equipment. If teachers' teaching ability and consciousness are insufficient, they cannot play their dominant role. Taking Jinhe Middle School in Genhe City as an example, English teachers' educational thinking is rigid or stereotyped. They cannot adapt to the needs of the rapid development of teaching technology and ideas. Some of them do not master modern educational technology, or they just stay at the theoretical level; some even think that other aspects of teaching (such as arouse interest and cultivation of autonomous learning ability) are "irrelevant" except for the teaching of knowledge.

It is understood that English teachers in Jinhe Middle School are seriously aged, with an average age of 45.7 years, only one teacher is under the age of 35, and it is inevitable for older teachers to be conservative. In the interview with the seven English teachers in Jinhe Middle School, a young teacher, Ms. Long reflected that she can skillfully use various teaching media, but the teaching tasks provided by the teaching team are almost to explain the textbook content and test papers. She can only present PPT made by herself to students when explaining new lessons, while there is almost no space for Seewo Whiteboard in English classes, it only can be used in music classes or activity classes.

To sum up, the age composition of English teachers in Jinhe Middle School in Genhe City is relatively large and their ideas are conservative. Even young teachers who have the ability and idea to use new educational media are also trapped in the educational ideas of teachers in the same curriculum group and cannot fully apply modern educational technologies.

2.2 Lack of Teaching Technology Training

"The Outline of National Basic Education Curriculum Reform" points out that: Vigorously promote the universal application of information technology in the teaching process, promote the integration of information technology and subject courses, gradually realize the transformation of the presentation of teaching content, students' learning methods, teachers' teaching methods and teacher-student interaction methods, give full play to the advantages of information technology, and provide a colorful teaching environment and powerful learning tools for students' learning and development. According to this policy document, there are also training programs for teachers to improve their technology skills, but according to the survey, these programs have not been truly effective implemented in Jinhe Middle School in Genhe City.

Mr. Wang, the vice principal of Jinhe Middle School in Genhe City and the director of the teaching management department, said that the superior education department (Genhe Education Bureau) has always been responsible for the selection and upgrading of the school's teaching equipment. The training on the use of the corresponding teaching equipment is carried out in the form of summer

continuing education. However, due to the epidemic situation, the training in the past two years has been online, and the content is mainly theoretical. And school takes such factors as teachers' ethics, professional level, teaching level, and students' academic achievements as the criteria for the promotion of teachers' professional titles or positions, which is not a decisive factor for the use of modern media in teaching, but can be used as a reference.

At present, in Jinhe Middle School of Genhe City, no one pays attention to teachers' ability to use offline teaching media. In order to get rewards, teachers focus on improving teaching to improve exam scores, while the training conducted by the Education Bureau will not have a good effect in terms of form. On the other hand, when teaching online, the school only pays attention to the completion of the curriculum, but lacks consideration of the efficiency level.

2.3 Further Exploration of Existing Problems

According to the survey and the analysis of the existing problems in the English teaching in Jinhe Middle School, deep reasons are explored further.

Firstly, it can be found that some teachers do not have a good grasp of the emerging teaching technology, and even some older teachers are not familiar with the network. Therefore, when facing some new educational media, teachers do not know where to start. Most of the time, multimedia teaching is only superficial, and the essence is just "putting students' textbooks on the computer screen". As for online classes, in addition to ensuring that students complete the course, teachers are not familiar with the Internet and cannot provide effective guidance for them, which directly leads to the low efficiency of students' English learning during online classes.

Secondly, even some young people who can master teaching technology quite skillfully do not know how and when to use these teaching media. This is mainly because teachers' educational quality and theoretical foundation are not solid, and the combination of theory and practice, traditional media and modern media is ignored in the teaching process. (traditional media: textbooks, teacher's language, etc.) In addition, teachers themselves lack initiative and explore educational technology independently. This leads to some teaching media cannot be properly and reasonably used. For example, some teachers make redundant knowledge points that students can fully understand into PPT and other forms. This will not improve students' learning efficiency, but will be counterproductive, making students unable to intuitively feel knowledge, thus losing the appropriate subject knowledge system. Some teachers rely too much on online homework correction (including online manual homework correction and machine aided homework correction), which reduces the workload of teachers. However, when students receive homework feedback, they pay less attention to homework than face to face correction, and the accuracy of machine assisted homework remains to be discussed.

Thirdly, teachers can't use modern educational technology to create an English learning environment full of learning interest for students. Junior high school students are still at an immature stage, and their self-control and independent learning ability have not been fully developed. Such characteristics are particularly obvious in the process of online teaching. If teachers fail to take advantage of modern educational media and grasp the age characteristics of students, Grasping students' innate curiosity in the information teaching environment and creating a good online learning environment will easily lead to students' burnout in online classes, lack of interest in online resources, and even frequent online learning deceptions.

Fourth, in online teaching, due to the limitations of online teaching and teachers' limited understanding of software functions, teachers and students cannot conduct synchronous or asynchronous interaction and "re-integration of time and space separation" in the process of online teaching (that is, when the time and space of teaching and learning are in a state of opposite separation, effective means are used to achieve two-way transmission of teaching and learning information in the same time and space). As a result, teachers cannot receive information from students in time, and students cannot receive feedback from teachers on their own learning results in time. For example, in the process of online teaching, it is difficult for teachers to understand students' mastery of knowledge; however, in the process of course playback or autonomous learning of network resources, students cannot find appropriate solutions to questions, or cannot get effective and timely answers.

3. Solutions to the Application of Modern Educational Technology.

3.1 From the Perspective of Education Authorities

The education authorities play a very important role in the development of modern education technology. It improves teachers' skills in using modern media and enables teachers to understand modern education ideas by establishing systems and conducting

regular and purposeful training.

Education authorities should put forward new expectations for teachers according to the standards of the new curriculum reform and become “talents of information abilities” and “talents of new era”. Teacher’s training should focus on the transformation of teachers' ideas from "traditional" to "modern". In addition, teacher training should adhere to the equal proportion of educational technology and teaching methods, both of which are equally important and should not be neglected.

In Jinhe Middle School in Genhe City (including other secondary schools subordinate to Genhe City), The “aging phenomenon” of English teaching group is very serious. It is urgent to change the content of teacher training from teaching method training to modern education concept and technology training. Training should not only stay in theory, but also let every teacher master the use of all teaching tools and online teaching video software to prevent "cramming" or online teaching accidents. What’s more, education authorities should work with schools to strengthen the frequency of assessment on teachers' use of teaching media and software so that teachers will realize that the school attaches great importance to teaching technology. Therefore, teachers will have a sense of crisis and urgency to improve their personal teaching ability. In addition, education authorities should create conditions to hire more flexible young teachers to enter township schools, so as to increase the vitality of the teaching staff and change the existing structure of English teachers in schools.

3.2 From the Perspective of Teachers

Teachers should give play to their own subjective initiative, establish the concept of active learning and lifelong learning, and improve their professional ability and professional knowledge constantly, especially in the current information society and school environment. They should enhance their information knowledge, improve their information awareness, exercise their information ability, and understand the corresponding information ethics constantly.

In order to improve their professional ability, teachers should seize the training opportunities provided by schools and education departments, and can also use rich and convenient network resources to learn modern education knowledge deeply, so that they make meaningful integration with the teaching process in their teaching practice to achieve the best teaching effect.

"Teaching benefits teachers as well as students " is one of the goals to be achieved in the modern education concept. "Teaching benefits teachers as well as students" means that promoting teaching and learning to enhance each other. It means that through teaching and learning, students can not only make progress, but also teachers can improve their own ability; so both of them can achieve mutual promotion between teaching and learning. In the English teaching of Jinhe Middle School in Genhe City, teachers and students are in a relatively independent position, which results in teachers paying too much attention to their own authority and students' "obedience", forcing students to learn in a dignified way, rather than focusing on how to improve students' interest in learning, so as to improve teaching methods.

In fact, many teaching technologies can enable students to participate in the class. When teachers guarantee that they can fully explain key and difficult knowledge, because young people tend to be more receptive and more interested in new things. Therefore, it can form a “flipped classroom” and a “blended learning mode” in which teachers supervise and manage, provide resources, and students use modern educational technology to learn independently.

"Flipped classroom" refers to readjusting the time inside and outside the classroom, transferring the decision-making power of learning from teachers to students. In this teaching mode, students can focus more on active project-based learning and jointly study and solve problems, so as to gain a deeper understanding of the valuable time in the classroom. The so-called "blended learning" is to combine the advantages of traditional learning methods with the advantages of web-based learning. It not only gives play to the leading role of teachers in guiding, enlightening and monitoring the teaching process, but also fully reflects the initiative, enthusiasm and creativity of students as the main body of the learning process.

Conclusion

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A Comparative Analysis of Old and New High School Mathematics Textbooks from the Perspective of Mathematics Core Literacy -- Taking the Trigonometric Function Content of the Human Education Edition as an Example

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Abstract: The promulgation of the Curriculum Standards for ordinary high School (2017 edition, 2020 revision) has effectively promoted the reform of high school mathematics classroom. In order to cope with the change of textbook content in the new curriculum reform, it has become one of the important tasks for high school mathematics teachers to implement teaching activities better and sort out and analyze the differences between the old and new textbooks. This paper analyzes the differences between old and new textbooks from the three dimensions of system structure, course content and example exercises, and gives some reasonable teaching suggestions. Among them, the new textbook uses 2019 "Ordinary High School Textbook" person-taught A version of Compulsory Mathematics 1, and the old textbook uses 2004 "Ordinary High School Mathematics Curriculum Standard Experimental Textbook" person-taught A version of compulsory Mathematics 4. In general, the adjustment of the new teaching materials is more in line with the cognitive characteristics of students, pay attention to the penetration of mathematical culture and pay attention to the development of students' mathematical core literacy.

Keywords: Mathematics Core Accomplishment; High School Mathematics; Textbook Comparison; Trigonometric Function

1. Introduction

Textbook is a bridge connecting curriculum standards and teaching implementation, and the quality of textbook writing is directly related to the implementation of curriculum concepts and the achievement of teaching objectives. It is not only the main reference basis for students' learning, but also the basis and guarantee for teachers' curriculum design and teaching process. Mathematics teaching materials also change, which is a new challenge for most teachers. Therefore, the comparative analysis between the old and new textbooks has certain significance, which can help teachers better grasp the new textbooks, compare the differences with the old textbooks, and improve teaching efficiency. Trigonometric function is the content of the fifth chapter of the new textbook for senior high school. It is an important mathematical model to describe periodic phenomena. It plays an important role in mathematics and other subjects. By learning trigonometric functions, students can develop core mathematical qualities such as logical reasoning and mathematical operations while cultivating mathematical ideas such as combination of number and form, reduction and classification and discussion ^[1].

2. The new and old teaching materials trigonometric function part of the system structure comparison

2.1 Comparison of the order of chapters in old and new textbooks

Students' physical and mental development has the characteristics of sequence and imbalance, which requires that the textbook

should conform to the students' cognitive law and acceptance ability when arranging chapters. Logical and systematic teaching materials play a very important role in cultivating students' core mathematical literacy. The following is a comparative analysis of the order of chapters in the "Trigonometric function" part of the new and old teaching materials, as shown in Table 1-1:

Table 1-1 Comparison of the order of trigonometric function chapters in the old and new textbooks of the Hanyu version

	The new Student textbook	Old textbook
Compulsory 1	Chapter Five trigonometric functions	Chapter One trigonometric functions
	5.1 Any Angle and radian system	1.1 Arbitrary Angle and radian system
	5.2 Concept of trigonometric function	1.2 Trigonometric function of any Angle
	Read and think about trigonometry and astronomy	Read and think about trigonometry and astronomy
	5.3 Induction formula	1.3 Induction formula of trigonometric function
	5.4 Image and properties of trigonometric functions	1.4 Image and properties of trigonometric functions
	Explore and discover the period of function $y = A \sin(\omega x + \varphi)$ and function $y = A \cos(\omega x + \varphi)$	Explore and discover the period of function $y = A \sin(\omega x + \varphi)$ and function $y = A \cos(\omega x + \varphi)$
	Explore and discover the properties of sine and cosine functions by using the properties of the unit circle	Explore and discover the properties of sine function and cosine function by using trigonometric function in unit circle
	5.5 Triangular identity transformation	Information technology applications draw a function $y = \tan x, x \in (-\frac{\pi}{2}, \frac{\pi}{2})$ using a positive tangent
	Information technology application Using information technology to make trigonometric function table	1.5 Image of the function $y = A \sin(\omega x + \varphi)$
	5.6 function $y = A \sin(\omega x + \varphi)$	Read and think about amplitude, period, frequency, phase
	5.7 Application of trigonometric functions	1.6 Simple application of trigonometric function model
	Read and think about amplitude, period, frequency, phase	Brief summary
	Brief summary	Review reference
	Review reference Question 5	Chapter three trigonometric identity transformation
		3.1 Sine, cosine and tangent formulas for the sum and difference of two angles
		Information technology application Using information to make technical trigonometric function table
		3.2 Simple triangular identity transformation
		Brief summary
		Review reference

Compulsory 2	The sixth chapter is scalar orientation and its application	Compulsory 5	Chapter 1 Solving triangles
	6.4 Application of plane vectors		1.1 Sine theorem and cosine theorem
			Further discussion of exploring and discovering the solution triangle
			1.2 Application Examples
			Reading and thinking by Helen and Qin Jiushao
			1.3 Internship
			Brief summary
			Review reference

According to the above table, it can be found that in the old textbooks, the knowledge point of "trigonometric function" is divided into three parts: "Trigonometric function" in chapter 1 of Mathematics Compulsory Course 4, "Trigonometric Identity Transformation" in chapter 3, and "Solving triangle" in chapter 1 of compulsory Course 5. The new textbook integrates the two parts of Chapter 1 and Chapter 3 of Compulsory 4 into the fifth chapter of compulsory Volume 1, "Trigonometric Functions".

2.2 Comparative analysis of content deletion and change in teaching materials

Comparing the two textbooks, it is found that the new textbook has deleted the content of "Solving triangles" in the first chapter of compulsory 5, and put the sine theorem and the cosine theorem into the sixth chapter of "Plane Vectors and their Applications" in the second volume of compulsory textbook, so that they are no longer an independent chapter ^[2]. In the section "The image of function $y = A \sin(\omega x + \varphi)$ ", the section "Mathematical model of uniform circular motion" has been added. In terms of information technology, the content of "Drawing functions with positive tangential lines" and "functions of $y = \tan x, x \in (-\pi/2, \pi/2)$ " have been deleted from the new textbook, emphasizing the reasoning function of triangular identity transformation. It shows that the new teaching material has shifted its focus on the cultivation of mathematics core literacy, gradually transiting from the old teaching material to the cultivation of students' reasoning ability, which meets the training requirements of the six major mathematics core literacy proposed by the new curriculum standard.

3. Comparative analysis of course content

3.1 Comparative analysis of chapter introduction and chapter header

At the beginning of each chapter, the mathematics textbook is equipped with a chapter header diagram and introduction, which aims to explain the main learning content of the chapter, make students clear about their learning motivation and goals, and stimulate their learning interest ^[1]. Senior high school mathematics teachers should be familiar with the compilation of textbooks, make full use of the pre-chapter part of textbooks, set up reasonable teaching situations, and develop students' core quality of mathematics. For the chapter head picture, generally choose the picture related to the knowledge point of this chapter, reflect a certain mathematical beauty, let students feel that mathematics comes from life. In the trigonometry teaching section, both the old and new textbooks use the day-night alternation caused by the earth's rotation and the four-season alternation caused by the revolution, which are closely related to students' daily life. In the section at the beginning of the chapter, the new textbook only sets the chapter title and deletes the six section titles of the old textbook, which have been shown in the catalog. The new textbook avoids unnecessary repetition. In the section at the beginning of the chapter, the new textbook simply summarizes the knowledge of this chapter and points out that the trigonometric function describing the rule of periodic change can be learned by using the experience of learning functions. Reduce students' learning burden while permeating the mathematical idea of analogy ^[3].

3.2 A comparative analysis of the contents of old and new textbooks

3.2.1 Column setting

Column setting is one of the important parts of the textbook, which helps the teacher to teach and also leaves the space for students to learn independently. Through comparison, it is found that the old and new textbooks have set up columns such as exploration, thinking, narration and induction, while the new textbooks also set up introductory language in each section. The new teaching materials focus more on inquiry and reduce the thinking part, and introduce new knowledge in the form of inquiry, so that

students can take the initiative to learn, which puts forward different levels of requirements on students' knowledge and ability. The inquiry-based and heuristic learning methods can fully mobilize students' enthusiasm for learning. In addition, the new textbooks are more concise in language expression and more reasonable in color matching.

3.2.2 Comparative analysis of the summary of this chapter

The summary of this chapter is a compound habit column, which aims to guide students to sort out the key content learned in this chapter. The content arrangement is in line with the basic concept of the new curriculum, and is a good material for implementing the new curriculum concept. In the summary part of this chapter, both the new and old textbooks are composed of two parts: "Knowledge structure of this chapter" and "Review and reflection". Among them, "Knowledge structure of this chapter" is presented in the form of mind map, so that students can intuitively see the whole content of this chapter, which helps students quickly identify the core content and establish a systematic knowledge system [4]. The old textbook directly lists seven points in the form of questions, which refer more to whether students can generalize certain content by themselves. The new textbooks summarize more and add examples to arouse students' memories of knowledge points; Then six questions are given to guide students to review the whole chapter. Compared with the old textbook, the new textbook is more concise in the question setting, which helps students to reflect on the learning effect and deepen the understanding of knowledge points

4. Comparative analysis of example problem and exercise system

4.1 Arrangement form

The set of exercises is mainly for students to master the relevant knowledge points of this lesson and deepen their understanding of the knowledge. There is little difference between the new and old textbooks in the arrangement of exercises, which is mainly reflected in the review of reference questions. The old textbooks divided the exercises into A group and B group, and the content was also based on the difficulty of the exercises. The purpose was to identify students' learning ability from the difficulty of the review questions. In terms of review questions, the new textbook changes the original grouping form and divides it into three sections: "review and consolidation", "comprehensive application" and "expansion and exploration" [5], in which the difficulty level of each section is progressive, and this arrangement form develops students' core mathematical literacy from different levels of problem solving.

4.2 Volume comparison

The right amount of practice can effectively consolidate the learning content, but excessive practice will increase the burden of students. Compare the differences in the number of exercises between the new and old versions of the textbook "Trigonometric Functions", as shown in Table 3-1:

Table 3-1 Comparison of the number of exercises

		New teaching material		Old textbook	
		quantity	percent	quantity	percent
exercises	example	45	16.92%	52	15.95%
	practice	97	36.47%	92	28.22%
	Session exercises	90	33.83%	124	38.04%
	exercises	34	12.78%	58	17.79%
	total	266	100%	326	100%

It is found that the two textbooks have little difference in the amount of questions, and the new textbooks are more reasonable in arrangement. Among them, the new textbook reduces 7 examples, increases 5 exercises, reduces 34 exercises, and reduces 24 chapter exercises, because the "triangular identity transformation" in the old textbook is a separate chapter, and the new textbook combines it into a subsection, the "triangle area formula" is deleted and the "triangle solution" part is merged, so the number of questions is reduced more. The new textbooks weaken the algebraic operation of trigonometric functions and pay more attention to the students' learning of mathematical ideas and methods.

4.3 Question type comparison

Comparing the teaching materials, it is found that the old and new textbooks mainly focus on calculation problems, followed by drawing problems and proof problems. The exercise Settings of the new textbooks are more in line with students' learning rules and pay attention to the cultivation of students' mathematical operation ability and logical reasoning ability. Among them, the examples of old textbooks are mainly in the form of "question + answer" or "question + answer + summary". On the basis of the old textbook, the new textbook adds an "analysis" link to some more abstract mathematical problems and examples containing complex realistic background, which becomes the example setting form of "problem + analysis + solution + summary". This link not only alleviates students' understanding of the example problems, but also enables students to disperse their thinking and think independently through the "analysis" part.

5. The teaching suggestions under the comparison of old and new curriculum standards

The new curriculum standard puts forward some curriculum concepts such as core quality orientation, curriculum structure and emphasis on discipline practice in the aspects of curriculum objectives and implementation. Teaching materials are of profound significance in promoting the transformation of discipline knowledge into core literacy and guiding the teaching reform of discipline practice [6]. Based on the new curriculum standard, teachers cultivate students' mathematics core quality in the teaching process. Please refer to the following:

Emphasis on practice, experience to strengthen the understanding and application of formulas. Logical reasoning ability and mathematical operation ability are one of the basic mathematical abilities that students must have, which requires teachers to keep pace with The Times in the teaching process, and consciously cultivate students' logical reasoning ability and mathematical operation ability in the process of preaching and teaching. There are many formulas in the "trigonometric function" section, and the derivation and understanding of formulas is a big difficulty for students. When teaching, teachers should lead students to deduce formulas, perceive the origin of mathematical formulas, and strengthen their understanding of formulas.

Second, we should dig deeply into the teaching materials and innovate the situational classroom teaching. Teaching materials are important tools for both teachers and students. In mathematics teaching, teachers should, on the one hand, study the teaching materials deeply, dig out the core quality of mathematics contained therein, design teaching objectives based on the actual situation of students, break the traditional teaching mode, create learning situations based on real life, create an active learning atmosphere for students, and enable students to flexibly apply mathematics knowledge to practice. In this process, improve students' mathematical thinking ability and cultivate good mathematical core literacy.

Optimize the teaching mode and design diversified teaching methods. Diversified teaching refers to the teaching method that ADAPTS to different students' learning characteristics and needs through a variety of different teaching methods and strategies to improve students' learning interest and participation. With the implementation of the new curriculum standards, the reform and innovation of educational methods have become particularly important. Mathematics teachers should change the single teaching mode in the teaching process, combine research and innovation, and aim at developing students' innovative ability, so that students can continuously improve their core mathematics literacy in the process of practice and innovation

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Research on the Influence Mechanism of Training Improvement on the Satisfaction of College Teachers and Staff from the Perspective of Hierarchy of Needs Theory ——Taking Private Colleges and Universities in Chengdu as an Example

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Abstract: As a result of China's evolving higher education landscape, private universities have emerged as significant players, fostering democratization and fulfilling key roles. However, these institutions face distinct challenges shaped by legal, societal, and internal factors. In the knowledge-driven economy, employee satisfaction is crucial for success. Understanding pivotal factors and conducting satisfaction surveys are essential for effective management and talent retention. This study focuses on Chengdu's private university educators, analyzing how factors like belongingness, self-actualization, and rewards influence job satisfaction. Through surveys, data analysis, and literature review, this study refines its findings and uncovers underlying causes. The study offers actionable insights for educators and institutions, aimed at enhancing job satisfaction.

Keywords: Private Higher Education; Job Satisfaction; Factors; Chengdu Educators

1. Background

In the 21st century's knowledge economy, enterprise survival depends on employee innovation and roles. Effective management demands understanding factors impacting job satisfaction. Employee satisfaction surveys are crucial, guided by Maslow's Hierarchy of Needs theory. Modern insights prioritize influencing behavior, with satisfaction as a cornerstone. Studies link it to customer satisfaction and profit growth. Chengdu's private higher education has grown but lags in quality and influence. Competitiveness hinges on a robust incentive system. This study focuses on Chengdu's private universities, using motivation theories to enhance talent management for sustainable development.

2. Theoretical Basis

2.1 Theoretical Significance and Value

Private higher education in China, due to its nascent stage and factors like its inherent nature and domestic policies, remains at a relatively lower level compared to developed nations. Despite Chengdu's prominence in education and ongoing improvements, challenges persist. This study focuses on Chengdu, analyzing motivating policies for educators, aiming to make theoretical contributions to educator development. Enhancing satisfaction aids stability, talent attraction, and work enthusiasm, crucial for Chengdu's private higher education quality and competitiveness.

2.2 Practical meaning and value

With the rapid development of private colleges and universities in my country, teacher resources, as the most important part, are gradually evolving into the core resources of talent training. As the fundamental driving force for the cultivation of talents in private

colleges and universities, the construction of teaching staff is crucial to the improvement of the competitiveness of private colleges and universities. Among them, employee satisfaction, as a barometer of faculty construction, has attracted much attention. Based on the perspective of demand hierarchy theory, it is of practical significance to analyze the current situation of the development of teachers in private colleges and universities in Chengdu, and to study the construction of teachers in private colleges and universities.

3. Recognize the influencing factors of the satisfaction of teachers and staff in colleges and universities

3.1 Hierarchy of Needs Theory

The Hierarchy of Needs Theory, developed by Abraham Maslow, categorizes human needs into five levels: physiological, safety, social, esteem, and self-actualization. These needs form a pyramid, where higher-level needs emerge once lower-level ones are satisfied. Each individual experiences these needs with varying intensity based on context and age (Maslow, 1943) ^[1].

3.2 Employee Satisfaction

Employee satisfaction is assessed by comparing actual experiences to psychological expectations, calculated as $\text{Employee Satisfaction} = \text{Actual Experience} / \text{Expectation}$. Ratios above 1 indicate higher satisfaction, where perceived value surpasses expectations. Zhang Wenlong (2013) emphasizes the impact of "belongingness" and "self-fulfillment" on employee satisfaction ^[2].

Anna (2006) highlights the influence of job rewards, including compensation, benefits, and rewards, on employee satisfaction and loyalty ^[3]. Zhu Yanli's (2016) research extends this by underscoring the role of "promotion opportunities" in career growth and satisfaction ^[4].

In summary, factors such as belongingness, self-fulfillment, job rewards, and promotion opportunities contribute to employee satisfaction, shaping their overall evaluation and attitude towards work and the organization. Recognizing these influences, managers can create positive environments and enhance employee satisfaction to drive organizational development.

4. The Conceptual Framework for the Research Study

4.1 Theoretical Foundation of Employee Satisfaction in Private Universities

The analysis of employee satisfaction in private universities draws upon established theories to shed light on its intricacies. The Need Hierarchy Theory by Maslow serves as a framework for understanding employee needs and motivations. This theory classifies needs into physiological, safety, social, esteem, and self-actualization levels, revealing their hierarchical influence (Maslow, 1943) ^[1].

4.2 Employee Satisfaction and Maslow's Hierarchy of Needs

Employee satisfaction is intricately linked to Maslow's theory. The lower-level needs, such as fair compensation (physiological), job security (safety), and supportive work relationships (social), form the foundation for higher-level needs like recognition (esteem) and opportunities for personal and professional growth (self-actualization). The fulfillment of these needs contributes to employee contentment, engagement, and overall satisfaction.

4.3 The Role of Management and Organizational Strategy

Just as state-owned enterprise reform requires effective governance, employee satisfaction necessitates astute management strategies. Aligning with the Principal-Agent Theory (Xiong, 2020) ^[5], organizational leaders must address the agency problem between employees and management. Providing transparent channels for communication, fair reward systems, and opportunities for skill development enhances the relationship between employees and the organization.

4.4 Government Support for Employee Satisfaction Enhancement

The government plays a crucial role in facilitating employee satisfaction enhancement in private universities. Similar to the state's involvement in state-owned enterprise reform, policymakers can create an enabling environment for employee development and engagement. By promoting competitive compensation, ensuring a safe and inclusive workplace, and encouraging professional growth, the government can bolster employee satisfaction and contribute to the overall success of private universities.

5. Influencing factors of training promotion in private colleges and universities in Chengdu on the satisfaction of teachers and staff

5.1 Fulfilling Higher Needs: Training as a Catalyst

In the realm of higher education, the significance of training programs transcends mere skill enhancement. These initiatives serve as a fulcrum for addressing the higher-order needs of university faculty, as outlined by Maslow's Hierarchy of Needs. By fostering professional growth, skill diversification, and cognitive stimulation, training interventions empower educators to ascend the hierarchy and realize their self-actualization aspirations.

5.2 A Synergistic Approach: Training and Job Satisfaction

Empowering faculty with tailored training not only enhances their skill set but also fuels a sense of accomplishment and recognition - pivotal components of esteem needs. This, in turn, augments overall job satisfaction and contributes to a harmonious academic environment.

5.3 Nurturing Entrepreneurial Mindset: A Holistic Approach

By recognizing their pivotal role in shaping the institution's academic stature, training programs can imbue educators with a sense of belonging and purpose - aligning with the social and esteem needs posited by Maslow's framework.

6. Conclusion: Catalyzing Faculty Fulfillment and Institutional Excellence

In the context of private universities in Chengdu, the nexus between training enhancement and job satisfaction assumes paramount importance. A nuanced understanding of Maslow's Hierarchy of Needs elucidates how training interventions cater to diverse strata of faculty aspirations. As educators satiate their higher-order needs through training-induced growth, institutions stand poised to harness a more engaged, fulfilled, and empowered faculty cohort. This holistic approach, rooted in established psychological theory, acts as a potent catalyst for not only individual satisfaction but also the overarching excellence of educational institutions.

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Exploration and Research on the Construction of New Business Specialty Group Based on the Integration of Industry and Education

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Abstract: With the continuous deepening of quality education and new curriculum reform, the integration of production and education, as a brand new educational concept, has been paid more and more attention, especially in various colleges and universities, where the integration of production and education has played an extremely important guiding role. The new business professional group established based on the integration of production and education can not only further deepen the cooperation between schools and enterprises, but also deepen the cooperation between schools and enterprises. An integrated and sustainable development path can also be built to the greatest extent possible. Therefore, the article first of all, based on the integration of production and education to build a new business professional group of the significance of in-depth analysis; On this basis, the main measures for the construction of new business specialty group based on the integration of production and education are put forward.

Keywords: Integration of Production and Education; New Business Specialty Group; Construction Exploration

Introduction

In the current stage of colleges and universities, measures such as the integration of production and education and school-enterprise cooperation have played a very important role. Although they have played a good role in promoting the development of colleges and universities, they also put forward higher requirements for professional construction. Therefore, this makes how to carry out professional construction more efficiently, ensure the effective docking between industrial development and professional construction, so as to create an integrated sustainable development professional group, has become an urgent problem to be solved. Therefore, it is necessary to fully base on the actual situation of the development of higher education, take the integration of production and education as the foundation, and further build a new business professional group, so as to ensure that the construction of the new business professional group has a perfect content, background and path to the greatest extent.

1. Significance of constructing new business specialty group based on the integration of production and education

In the actual process of higher education, through school-enterprise cooperation and the integration of production and education, enterprises themselves can play a key role in the main body, and further promote the effective integration of high-quality talents and other aspects. The integration of industry and education mainly refers to the integration between industry and higher education, so that the two can penetrate each other into an organic whole. The specific quality of the integration of industry and education has a direct impact on the in-depth cooperation and integrated development of schools and enterprises. They are the docking of professional standards and curriculum education, the docking of production process and education process, the docking of vocational qualification certificates and graduation certificates, the docking of lifelong learning and higher education, and the docking of job requirements and professional Settings. The construction of the new business major group mainly focuses on the construction of modern majors such as e-commerce, and takes business administration, accounting, logistics management and marketing as major professional groups. The main purpose of the construction of the new business major group is to promote the healthy development of each college and university, further optimize the overall internal layout, and give play to the advantages of the school itself. So that the students can

better serve the industry. At the same time, it is also conducive to the integration, optimization and sharing of higher education resources, which can not only strengthen the construction of core majors, but also play the leading role of advantageous majors, and strengthen the core competitiveness and social influence of colleges and universities.

2. Main measures for the construction of new business specialty group based on the integration of industry and education

2.1 Construction of new business professional group curriculum system

In order to carry out the construction of the new business professional group curriculum system more efficiently, it is necessary to closely focus on the service field of each business profession, and do a good job of the corresponding higher post research work, carry out a detailed and professional higher ability analysis, and form a more comprehensive new business professional group post ability analysis report. At the same time, it is necessary to take the field of professional post group work as the core, rebuild professional module courses and professional group platform courses, promote the formation of closer links between different majors, and establish an open and shared curriculum system. In addition, we should also follow the main laws of higher education personnel training, respect the cognitive characteristics of students themselves, scientifically and reasonably refine the course education content of different stages, and control the number of professional group platform courses to more than 50% of the total number of courses, and group elective courses should also occupy more than 50% of the total elective courses. In the construction of the new business professional group curriculum system, it is also necessary to establish a course resource sharing and development system featuring integration of production and education and cooperation between schools and enterprises, and deepen the course reform of diversified teaching modes. Among those group platform courses, more than 70% have very key auxiliary educational resources, which can jointly develop the basic teaching requirements of professional courses and the setting of all courses. They should have perfect teaching requirements and curriculum standards, effectively integrate the skills, knowledge and professional quality required by vocational positions in the real society into professional courses, and build a professional teaching resource that includes teaching implementation, teaching design and teaching evaluation.

2.2 Reform the talent training mode of the new business specialty group

The training concept of new business talents has played a good role in promoting the reform of higher education and teaching mode. Under normal circumstances, the cultivation of new business talents is mainly to take new business characteristics as the basis, adjust the talent training structure according to the actual situation of the school, further innovate the training carrier and training content, extend it effectively while expanding the professional connotation, and deeply reflect on the training methods and rules of talent training. Explore the teaching and research methods and construction models of professional groups that can span the major. In addition, under the guidance of the construction of new business majors, we should also actively carry out the construction of professional talent training programs and further optimize the evaluation model and teaching model.

2.3 Carry out the construction of shared dual division teams

Ordinary undergraduate schools should have strong teaching and research strength, and the total number of full-time teachers should generally make the teacher-student ratio no higher than 18:1; The number of part-time teachers shall not exceed one quarter of the full-time teachers of the school. At the same time, the members of the professional teaching team must have a master's degree or above, the proportion of full-time teachers with doctoral degrees in the total number of full-time teachers should generally reach more than 20%, so as to ensure that 50% of the team members have senior titles during the construction of the shared double teacher team. In addition, schools should also closely focus on the construction of professional groups, formulate corresponding teaching teams for new business major groups, help them clarify the main teaching objectives and teaching tasks, provide necessary financial and institutional guarantees, and ensure that the teaching teams of new business major groups can fully play their role in the actual teaching process.

2.4 Relying on the Internet background to develop new business professional groups

In the context of the rapid development of Internet technology, all areas of society should make full use of Internet technology

and Internet tools to actively carry out transformation and upgrading. Especially in the education industry, it is necessary to increase the application of Internet means, promote the construction of new business professional groups under this Internet background, and build new business professional groups with business administration, e-commerce, marketing and other majors, and have a certain degree of change in teaching methods, teaching resources and teaching tools. Therefore, teachers in colleges and universities must also improve their adaptability, focus on digital resources, take information-based teaching as the main means, and actively integrate into the construction process of digital teaching resource database and digital campus, so as to effectively drive the reform of internal talent training mode in colleges and universities. It plays a good role in promoting the construction of the professional group curriculum system.

2.5 Construction of new management system

The construction of the new management system needs to deepen the construction of specialty clusters, adjust the layout according to the local industrial structure on the basis of the development of the original specialty with characteristics, attach importance to the development of modern industry and the objective needs of talents, make overall planning for different specialties within the specialty group, concentrate the superior resources of the school, build professional clusters with social needs and improve the concentration of specialty with characteristics and advantages. Ensure the ability to connect industries. It should be noted that there is inevitably a difference between the industry cycle and the talent training cycle. Therefore, based on the training requirements of applied talents, schools need to independently determine the direction of professional development when necessary according to the laws of industry development and local economy and society, break the traditional education model, and integrate the practical work process into the construction of professional groups and talent training plans.

Conclusion

To sum up, with the continuous deepening of school-enterprise cooperation and the integration of industry and education, the future development of professional construction will inevitably develop in the direction of integration, and better optimization will be carried out from the aspects of curriculum construction, professional construction, and dual-teacher team construction, so that teachers, students, schools and cooperative enterprises can benefit from it.

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Factors Influencing Professional Identity among Faculty in Private Higher Education Institutions in Chengdu, China

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Abstract: Professional identity among faculty members in private higher education institutions plays a vital role in shaping the quality and sustainability of these institutions. This research aims to investigate the factors influencing the professional identity of teachers in Chengdu's private higher education institutions. The study employs a theoretical framework centered on "identification" with behavior intention, behavior attitude, and sense of belonging as fundamental dimensions. Data were collected through questionnaire surveys and analyzed using SPSS 23.0. The study hypothesizes that behavior intention, behavior attitude, and sense of belonging have a significant positive impact on professional identity among faculty members. Additionally, behavior attitude, subjective norms, and perceived behavioral control are expected to have a significant positive influence on behavior intention, and subjective norms and perceived usefulness may positively affect sense of belonging. The results are expected to provide valuable insights for enhancing the professional satisfaction and educational quality of faculty in private higher education institutions.

Keywords: Private Colleges and Universities; Sense of Identity; Behavioral Intention; Behavioral Attitude

1. Introduction

Over the past few decades, private higher education institutions have significantly expanded in China, contributing to the democratization of higher education and enriching the educational landscape. However, these institutions often face challenges in maintaining a stable faculty workforce, which impacts their competitiveness in the education sector. High-quality and stable faculty members are essential for the survival and growth of private higher education institutions, directly affecting the institutions' academic standards and long-term development (Wang X., 2019) ^[1].

1.1 Research Background

In recent years, China has witnessed rapid growth in private higher education institutions, particularly in regions like Chengdu, which has emerged as a new first-tier city with a thriving economy and numerous established private higher education institutions. Understanding the factors influencing the professional identity of faculty members in these institutions has become increasingly significant.

1.2 Research Objectives

This research aims to explore the factors influencing the professional identity of faculty members in private higher education institutions in Chengdu, China. Specifically, the study seeks to analyze the impact of behavior intention, behavior attitude, and sense of belonging on professional identity. It also investigates the relationships and significance between the various dimensions and professional identity.

2. Research Scope

The scope of this study is limited to faculty members in private higher education institutions in Chengdu, Sichuan Province. The sample will be drawn from a diverse range of institutions to ensure a representative dataset. The study will focus on faculty members'

educational qualifications, gender, salary income, and job position as demographic variables, aiming to build a comprehensive understanding of the influencing factors on their professional identity.

3. Theoretical Framework

Professional identity, as the central construct, encompasses behavior intention, behavior attitude, and sense of belonging. Scholars in the field have provided various definitions of behavior intention, such as the "appreciation of worth, quality, importance, etc," indicating the individual's willingness to accept new ideas and suggestions (Ajzen, 1991)^[2]. Additionally, behavior attitude represents an individual's cognitive inclination towards specific behaviors based on their values, perceptions, and preferences (Liu W., 2022)^[3]. Sense of belonging, also known as affiliation, refers to an individual's internal connection with a particular group and reflects their psychological manifestation of identification, acceptance, and maintenance with the group (Zhang L., 2022)^[4].

4. Research Limitations

Despite the rigorous research design, this study has several limitations. Firstly, the limited literature on the factors influencing professional identity among faculty members in private higher education institutions might constrain the comprehensive understanding of this construct. Secondly, the design and data collection of the questionnaire may not cover all aspects of faculty members' professional identity, leading to potential bias in the analysis results. Lastly, the use of SPSS 23.0 for data analysis may limit the depth of exploration into the relationships between variables. Future research could involve more qualitative methods, such as in-depth interviews, to gain additional insights.

5. Expected Findings

Based on the proposed theoretical framework, we anticipate several potential findings. Firstly, behavior intention, behavior attitude, and sense of belonging are expected to have a significant positive impact on faculty members' professional identity. This suggests that faculty members' willingness to actively participate in curriculum reform and teaching, their attitudes towards these activities, and their sense of belonging to the institution will directly affect their professional identity. These factors may play a critical role in determining the level of their engagement in their work.

Secondly, behavior attitude may positively influence behavior intention, while subjective norms and perceived behavioral control may positively affect behavior attitude. These findings indicate that faculty members' attitudes towards curriculum reform and teaching activities may influence their willingness to participate, and their personal subjective norms and perceived control may affect their attitudes.

Lastly, subjective well-being and perceived usefulness may positively affect the sense of belonging. This finding implies that faculty members' perception of their well-being and the perceived usefulness of their work may enhance their sense of belonging to the institution. These factors could motivate faculty members to actively engage in their work.

6. Conclusion

This research aims to explore the factors influencing the professional identity of faculty members in private higher education institutions in Chengdu, China. By adopting a theoretical framework centered on "identification" with behavior intention, behavior attitude, and sense of belonging as key dimensions, we expect to gain valuable insights into the relationship between these factors and professional identity. The findings of this study are expected to have significant theoretical and practical implications.

The results of this study may contribute to the growing body of literature on professional identity in the context of private higher education institutions. Moreover, the findings could provide practical guidance for academic institutions to enhance faculty members' job satisfaction, retention, and engagement, ultimately improving the quality of education.

7. Practical Implications

This research could offer actionable recommendations for both individual faculty members and educational institutions:

7.1 For Faculty Members

Faculty members should recognize the importance of developing a positive attitude towards their work and actively engage in curriculum reform and teaching activities. By understanding the significance of their contributions to the institution and their students, faculty members can foster a sense of belonging, which is essential for job satisfaction and professional identity.

7.2 For Educational Institutions

Educational institutions should invest in creating a supportive and inclusive work environment that promotes faculty members' well-being and provides opportunities for professional growth. Encouraging open communication, collaboration, and feedback among faculty members can strengthen their sense of belonging and improve overall job satisfaction.

8. Future Directions

This research provides a foundation for future studies on faculty members' professional identity in private higher education institutions. Researchers can explore additional factors that influence professional identity and further investigate the complex relationships among different dimensions. Qualitative methods, such as interviews and focus groups, could be employed to gain deeper insights into the experiences and perceptions of faculty members.

9. Conclusion

In conclusion, this research aims to contribute to the understanding of the factors influencing professional identity among faculty members in private higher education institutions in Chengdu, China. The study's theoretical framework, consisting of behavior intention, behavior attitude, and sense of belonging, is expected to shed light on the intricate dynamics shaping faculty members' professional identity. By identifying key factors that positively impact professional identity, this research can serve as a valuable resource for educational institutions seeking to enhance faculty members' job satisfaction and engagement, ultimately improving the overall educational quality. Further studies in this area can build upon these findings, offering deeper insights into the complex interplay between faculty members' attitudes, perceptions, and their sense of belonging, leading to more effective strategies for fostering a vibrant and dedicated faculty workforce.

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Exploring the Path of Integrating the Second Classroom into the Task of Literacy in Colleges and Universities

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Abstract: Lifelong learning is the core content of university education work in the new period, and it is also the basic task of education work in colleges and universities. The second classroom is a kind of organized and planned educational and practical activities aiming at cultivating students' extracurricular ability and comprehensive quality. In the context of the new era, emphasizing and strengthening the construction of the second classroom in colleges and universities is an inevitable requirement for improving the quality of ideological and political education in colleges and universities. At present, there are still some problems in the moral education of the second classroom in colleges and universities in China. In order to enhance the effect of moral education in the second classroom of colleges and universities in the context of the new era, it is necessary to make a clear target positioning of the moral education of the second classroom, improve the process between the second classroom and the first classroom, and establish a three-dimensional system of moral education in the second classroom, so as to enhance its infectious and persuasive power.

Keywords: Colleges and Universities; Second Classroom; Moral Education

Introduction

Teachers should adhere to the principle of making people moral, which is the core of educational thought. The second classroom is a kind of expansion, is a kind of supplement, is a kind of extension, it is mainly through the ideological and political education, social practice, science and innovation competitions and other ways, in order to comprehensively improve the overall quality of students as the goal. Colleges and universities should make full use of the advantage of the "second classroom", actively develop the "new carrier" of practical teaching, fully implement the basic task of "cultivating moral education", and strive to cultivate students with firm ideological beliefs and a strong sense of social responsibility. They should strive to cultivate high-level talents with strong ideals and beliefs, a strong sense of social responsibility, and a high degree of innovative spirit.

1. The Important Role of Lifelong Learning in the Second Classroom of Colleges and Universities

"Lifelong learning" is a complete set of educational concepts based on the long and outstanding traditions of China and incorporating the advanced cultures of the Chinese revolution and socialism. Its connotation is constantly updated with the passage of time. Lifelong learning is the fundamental of college education, which is guided by the socialist spiritual civilization and under the new historical conditions, and is centered on cultivating the class of socialist undertakings in the new era. The implementation of the second classroom in colleges and universities is to improve the comprehensive quality of students and cultivate more excellent talents. The concept of "Lidu Shurenren" is a comprehensive and systematic education for students, which is a new understanding of the second classroom education. The second classroom to implement the "moral education" fundamental task, is an important supplement to the "moral education". Lidu shuren is an important part of moral education in colleges and universities. The concept of "Lidu Shurenren" can effectively make up for the deficiencies that exist in the training of talents in colleges and universities, and is the basic concept of practical education in colleges and universities^[1]. In the second classroom, the integration of Lidu Shuren into the second

classroom makes the second classroom become more personalized, as well as affinity, so as to better meet the development needs of the students, the second classroom and the first classroom constitute a systematic effect, helping students to establish correct values and life goals, so as to be able to effectively enhance the students' interest in learning, promote the comprehensive development of the students, and then cultivate students with strong ideal beliefs and strong practical ability. The second class and the first class constitute a systematic effect to help students establish correct values and life goals, which can effectively enhance students' interest in learning and promote their all-round development, and thus cultivate new talents with firm ideals and strong practical ability.

2. Current status of the implementation of the second classroom in higher education

2.1 Monotonous teaching content and low teaching quality

The second classroom is a kind of teaching activity that aims at all-round development and is centered on "cultivating moral integrity". It takes various forms, including ideological development, social work practice, scientific and technological innovation competition, volunteer service, and culture and art. However, at present, colleges and universities do not understand the second class correctly, and only limit its content design to colorful cultural and artistic activities, while neglecting its connotation construction, and lack of leadership and construction in ideological and theoretical aspects, thus reducing the effectiveness of the second class. Some colleges and universities do not have a clear overall plan and orientation when implementing the second class, coupled with the shortage of teachers' resources, resulting in a single curriculum design, lack of guidance and innovation, and unable to give full play to the students' subjective initiative.

2.2 Lack of a standardized system and immaturity of the second classroom system

In recent years, some colleges and universities have emphasized the construction of the "second classroom" and have applied the corresponding "credit system" to their educational work. However, many colleges and universities do not have enough understanding of the second class, comparing it with "clubs", and regard the second class as "optional", thus restricting the development of the second class. At present, although China's colleges and universities have established a relatively complete teacher evaluation system, but in the curriculum did not do the corresponding investigation, and did not take into account the needs of individual development of students, so that the degree of student participation in the second classroom is not high. The credit division standard of certain courses or activities is not scientific enough, resulting in a situation where low credit hours and low learning volume are exchanged for high credits, causing students to rush to choose courses with high credits that are easy to obtain. In addition, in teaching, many teachers are unable to grasp the teaching process well, and some of them teach only in the form of pictures and articles without specific teaching content, not to mention guidance in thinking, which results in a great reduction in the efficiency of education.

3. Discussing the implementation way of the second classroom in colleges and universities from the perspective of cultivating morality and cultivating talents

3.1 Integrate the second classroom into the education and teaching of establishing morality and building up people's moral character

Many colleges and universities have become more mature in terms of curriculum system, evaluation system, monitoring system, hardware and software construction, etc., but there is still a certain lag in the understanding of the "second classroom". The second classroom is an important way to cultivate compound talents. Colleges and universities should correctly position the second classroom, give full play to its synergistic effect with the first classroom, so that quality education in moral education, talent cultivation and other aspects to reach a new height. Colleges and universities should further deepen, refine, coordinate and innovate the management mechanism in planning and increase investment. We should adhere to the "moral education", fully utilize the new platform and carrier of the network, broaden the development path of the second classroom, conduct in-depth research with students as the main body, and create a good environment for the sustainable development of the second classroom. The orientation of the second classroom teaching should always adhere to the educational policy of "cultivating moral integrity", highlighting the "value-oriented" and

"process-oriented"^[2]. In teaching, we should not only focus on the pursuit of results, but also on students' good quality, solid personality and creative practical ability. We will increase the development of educational resources outside the school, expand the space of the second classroom, and strengthen the cooperation with the society in order to promote the growth of students.

3.2 Constructing a platform for "cultivating morality" and integrating the second classroom into the education of "cultivating morality".

For the healthy development of the second classroom in colleges and universities, it is necessary to create a good campus cultural atmosphere. A good campus cultural environment, in addition to a beautiful campus environment, solid library and laboratory facilities, logistical facilities and other harsh conditions, but also inseparable from the school spirit, academic style and other team building conditions on the quality of students' culture and education to produce a subtle impact. Colleges and universities should take "cultivating morality and nurturing people" as the guiding ideology, strengthen the infrastructure of campus culture in colleges and universities, and lay a solid cultural foundation for the development of the second classroom in colleges and universities.

The second classroom focuses on developing practical skills. Student associations are an important means of carrying out second-class activities. Through various forms of association activities, students can discover their own hobbies and give full play to their own specialties, and also through planning, organizing and carrying out a variety of activities, so that the students' practical ability can be significantly improved. However, at present, many colleges and universities have not invested enough funds in college student clubs, which restricts the development of college student clubs. Colleges and universities should pay enough attention to the second classroom and increase the investment, which in turn provides a strong guarantee for improving the actual teaching effect of the second classroom.

Conclusion

By integrating the second classroom into the task of cultivating moral integrity, colleges and universities can provide students with a broader space for development, and cultivate their moral sentiments, sense of social responsibility and creative ability. Formulating comprehensive activity plans, encouraging independent choice, and establishing a scientific evaluation system are all key paths to realizing this goal, thereby ensuring that college education continues to develop in the mission of cultivating morality and nurturing more excellent and well-rounded talents.

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Information Technology for Science Education Teachers and Students in the Context of Informatization Research on the Use of Capacity Improvement Strategies

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Abstract: This study focuses on the improvement strategy of information technology application ability of science education teachers and students under the background of informatization. Firstly, the current status of informatization of science education and the importance of the information technology application ability of teacher training students are analyzed. Subsequently, the promotion strategies were discussed, including curriculum design and implementation, teacher training and development, provision of practice environment and conditions, and construction of evaluation mechanisms. These strategies are expected to systematically improve the information technology application ability of teacher training students and provide effective support for the development of science education. However, these strategies also need to be tried and refined in practice to adapt to the development needs of information technology and science education.

Keywords: Science Education; Teacher Training Students; Information Technology; Informatization; Improvement Strategy

Introduction

Today, in the 21st century, the rapid development of information technology is profoundly changing the face of education. Especially in the field of science education, the introduction of information technology has provided new teaching methods, enriched teaching resources, and provided the possibility for the reform of teaching methods. Among them, the role of teachers is particularly important. They need not only solid scientific knowledge and educational skills, but also how to effectively use information technology for teaching. However, for this special group of teacher training students, it is more important to improve their ability to use information technology. This is not only about their own education and teaching ability, but also about whether they can cultivate students who adapt to the information society in the future. Therefore, it is undoubtedly of great theoretical significance and practical value to discuss how to improve the information technology application ability of science education teachers. Based on the analysis of the current situation of science education under the background of informatization and the importance of information technology application ability of teachers and students, this paper will deeply discuss the improvement strategy of information technology application ability, so as to provide support and reference for the development of information technology of science education.

1. Current situation of science education in the context of informatization

Informatization has deeply affected all aspects of science education. First, the way science education is taught has changed significantly^[1]. More and more teaching activities are being carried out online, such as online courses, virtual experiments, etc. These activities have greatly broadened the time and space constraints of science education and provided students with richer and more convenient learning resources.

Secondly, the application of information technology has also made the teaching methods of science education more diversified and personalized. For example, intelligent teaching systems can personalize teaching according to students' learning conditions, and scientific simulation software can make complex scientific concepts intuitive and easy to understand. However, in this process, the

lack of information technology application ability of teacher training students has become a prominent problem. Many teacher training students lack sufficient information technology knowledge and skills to effectively use information technology for science teaching. Moreover, due to the rapid updating of information technology, the knowledge and skills of teacher training students in the application of information technology often find it difficult to keep pace with its development. These problems pose severe challenges to the development of informatization in science education.

2. The importance of information technology utilization capabilities

The importance of information technology skills in science education has become increasingly prominent. First, information technology can greatly improve the efficiency and quality of science education^[2]. For example, using information technology, teachers can create interactive teaching content that makes complex scientific concepts more intuitive, while also providing timely feedback on students' learning through online assessment systems for accurate teaching. Therefore, having the ability to use information technology means that teachers can teach science more effectively. Secondly, the ability to use information technology is also an essential professional quality for teacher training students. The informatization of science education requires teachers not only to know how to use information technology, but also to understand information technology and be able to select and design appropriate information-based teaching methods and tools according to teaching needs. Therefore, having the ability to use information technology plays an important role in improving the professionalism and competitiveness of teacher training students. Finally, the ability to use information technology is also essential for teacher training students to cultivate students' information literacy. In the information society, information literacy has become an essential quality for citizens.

As future teachers, if they have a high level of information technology use ability, they can better teach students how to use information technology scientifically, safely and effectively, and cultivate their information literacy. This includes not only basic information technology operation capabilities, but also information retrieval capabilities, information analysis capabilities, and information evaluation capabilities. In the information society, these abilities have an important impact on students' learning, life, and even future work. Therefore, improving the ability of teacher training students to use information technology is not only related to their own education and teaching ability, but also to whether they can cultivate students who adapt to the information society in the future. From a larger perspective, improving the information technology application ability of teacher training students is also of far-reaching significance for cultivating the information literacy of modern citizens. This will play a positive role in promoting the promotion of information education in China and even the information process of the whole society.

3. Research on improvement strategies

In the face of the problem of insufficient information technology application ability of teacher training students, it is necessary to carry out a series of research on improvement strategies^[3]. The first is the curriculum design and implementation. Courses are the main way for teacher training students to acquire information technology knowledge and skills, so it is important to design and implement relevant courses to meet the information technology application needs of teacher training students. The content of the curriculum needs to cover the basic knowledge and skills of information technology, while also taking into account the application of information technology in science education. In addition, the curriculum needs to focus on developing the information literacy of teacher training students so that they can use information technology scientifically, safely and effectively. In the process of curriculum implementation, various effective teaching methods, such as case teaching and project teaching, should be adopted to improve the learning interest and practical ability of teacher training students. The second is teacher training and development. Due to the rapid updating of information technology, teachers need to continue learning to keep pace with its development. Therefore, providing a series of teacher training is an important way to improve the ability of teachers to use information technology. Teacher training can be provided by universities, education departments or professional institutions and covers new knowledge and skills in information technology and how to apply it in science education.

At the same time, it is also necessary to provide teachers with space for development, such as supporting them to participate in professional seminars, conduct educational research, etc.^[4], so as to promote their professional growth. The third is the provision of practical environment and conditions. Practice is an important way to upgrade skills, so providing a good practice environment and conditions for teacher training students is a necessary condition for improving their ability to use information technology. This

includes the provision of well-equipped computer laboratories for teacher training students to carry out hands-on operations; Provide rich teaching resources, such as teaching software, digital teaching materials, etc., for teachers and students to learn and reference; and providing a practical platform, such as supporting them to participate in instructional design competitions and teaching internships, so that they can improve their IT skills in practice. Finally, the construction of evaluation mechanisms. The evaluation mechanism plays an important role in stimulating the enthusiasm of teacher training students to learn information technology and accurately evaluating their ability to use information technology. Therefore, it is necessary to establish a reasonable evaluation mechanism, which evaluates both the information technology knowledge and skills of teacher training students, as well as their application ability and information literacy. In addition, evaluation methods also need to be diversified, such as written examination, operation assessment, teaching design, teaching reflection, etc., in order to comprehensively and accurately evaluate the information technology application ability of teacher training students. The above strategies are not isolated, but need to be integrated to form a systematic strategy system. Only in this way can we comprehensively improve the information technology application ability of teacher training students from many aspects and promote the development of information technology in science education.

4. Conclusion

With the development of information technology, the informatization of science education has become an inevitable trend. In this process, the ability of teacher training students to use information technology is particularly important. However, there are still some problems in the ability of teacher training students to use information technology, which poses severe challenges to the development of information technology in science education. Therefore, to improve the information technology application ability of teacher training students, it is necessary to form a systematic improvement strategy from the aspects of curriculum design and implementation, teacher training and development, provision of practical environment and conditions, and construction of evaluation mechanism. The curriculum is the basis for improving the information technology application ability of normal students, teacher training is the driving force for improving the information technology application ability of normal students, the practical environment and conditions are the guarantee for improving the information technology application ability of normal students, and the evaluation mechanism is the guidance for improving the information technology application ability of normal students. It is hoped that these strategies can provide some reference for improving the information technology application ability of teacher training students and promoting the development of information technology in science education. However, these strategies need to be tried and refined in practice to adapt to the challenges of rapid development of information technology and changing needs of science education.

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Exploring the Connection between Boredom and English Performance Through the Lens of Positive Psychology

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Abstract: Boredom is a prevalent emotion in foreign language learning, yet it remains relatively under-researched in the field of applied linguistics. A thorough understanding of the current state of boredom research in foreign language learning can not only enrich the theoretical achievements in the study of emotions in language education but also provide practical insights into effective ways to alleviate students' feelings of boredom. From the perspective of positive psychology, this paper argues that implementing effective teaching strategies to address students' boredom in foreign language classrooms is essential. Such strategies can stimulate positive emotions in English learning, ultimately fostering students' enthusiasm for the subject and enhancing their English performance.

Keywords: Boredom; Positive Psychology; English Performance

1. Introduction

Positive psychology explores happiness using scientific methods, focusing on positive mental qualities and well-being. In second language acquisition, it has led scholars to recognize the importance of diverse emotional experiences, including boredom (Dewaele & Li 2020). This research aims to investigate boredom's impact on foreign language learning, providing insights for future study and teaching methods.

2. Literature Review

2.1 Positive Psychology and Second Language Acquisition

In 2016, the release of two anthologies, *Positive Psychology in SLA* (Gregersen et al., 2016) and *Positive Psychology Perspectives on Foreign Language Learning and Teaching* (Gabrys'-Barker & Gałajda, 2016), initiated serious exploration of positive psychology in second language acquisition. These works signaled readiness in the field, leading to dedicated sections in journals like *Frontiers in Psychology-Language Sciences* and *The Modern Language Journal*. Li Chengchen (2021) summarized key theories, emphasizing the need for positive psychology in foreign language education in China. Despite this growing focus, the systematic study and empirical research in China's foreign language education are still developing, reflecting the late start of positive psychology in this sector.

2.2 Boredom and Second Language Acquisition

Boredom is a frequently occurring emotion in the learning process and has the potential to negatively affect second language learners' engagement, self-efficacy, and academic achievement. Researchers like Li Chengchen and Han Ye have discovered a significant negative correlation between the level of boredom in primary school foreign language classrooms and students' English performance. They further emphasize the need for intervention strategies targeted at boredom during the compulsory education stage (Li & Wei, 2022; Li Chengchen & Han Ye, 2022). Li Yunheng advocates that high school English teachers should pay attention to incorporating intrigue and diversity into their lesson planning to reduce students' feelings of boredom. A search on CNKI (China National Knowledge Infrastructure) using the keyword "boredom" yields only a limited number of related papers, suggesting that there are many untapped aspects of this topic waiting to be explored and researched.

3. Positive psychology

Positive psychology's definition varies, but commonalities exist among scholars. Introduced by Seligman and Csikszentmihalyi (2000), it uses scientific methods to tackle complex human issues, focusing on nurturing positive attributes rather than just resolving negative aspects. Unlike traditional psychology, positive psychology emphasizes the development of human character and robust traits, aiding growth rather than solely fixing weaknesses.

3.1 Positive Emotional Experience

Positive psychology focuses on the link between positive emotional experiences and education, a subject that has drawn significant scholarly interest. Central to this field is subjective well-being, characterized by three key traits: varying individual levels, an encompassing of both positive and negative experiences with a tendency towards the positive, and an overall description of a feeling state, not just fragmentary experiences. Unlike negative emotions, positive ones can enhance attention and creativity, broadening thinking and inspiring hard work. Amplifying positive emotions through personal stimulation can deepen understanding, exploration, and learning.

3.2 Positive Character Traits

As positive psychology stems from individuals' self-management and self-direction, positive character traits lay the foundation for establishing positive psychology. These traits are primarily driven and fostered by individual practice and potential capabilities. When faced with challenges, positive character traits assist in adopting more effective coping strategies. Positive psychologists also assert that positive behavioral patterns are primarily shaped through simulation and reinforcement, activating individuals' latent qualities, eventually forming character traits and behavioral patterns. Positive personality traits can aid individuals in deploying more effective coping mechanisms. In this context, experts have specifically studied 24 positive character traits, including autonomy, optimism, mature defense mechanisms, wisdom, etc. Positive psychologists believe that one of the optimal ways to cultivate these traits is to enhance individuals' positive emotional experiences.

4. Boredom in Foreign Language Learning

4.1 Definition of Boredom in Foreign Language Learning

Boredom, a complex emotional state, is ignited by the distasteful experience of being unable to engage in desired activities. It encompasses elements such as detachment, dissatisfaction, lack of focus, distorted time perception, and diminished vitality. Boredom in foreign language learning is considered an unpleasant emotional state resulting from low stimulation and arousal. Boredom in foreign language learning may share common features with general learning boredom, such as a lack of interest and difficulty concentrating. However, it is more intimately connected with the ecological environment of foreign language learning, displaying a high degree of situational specificity. Depending on the foreign language learning tasks, classroom environments, and teacher-student interaction patterns, it exhibits certain stability and variability.

4.2 Measurement of Boredom in Language Learning

Boredom emotion often appears in the foreign language learning environment, but the research on measuring this specific emotion is relatively new. In recent years, researchers have begun to delve into the conceptual structure, measurement methods, and influencing factors of boredom emotion (Dewaele 2020). Pawlak (2020), based on a sample of 107 English major students, developed a 23-item "Practical English Classroom Boredom Questionnaire," identifying two dimensions of boredom: 1) disengagement, monotony, and repetition; 2) insufficient satisfaction, lack of challenge. In China, Li (2021), targeting non-English major university students, and based on large-sample open-ended question data and interview data, proposed the concept of "foreign language learning boredom" and clarified its three-dimensional structure, subsequently compiling the "Foreign Language Learning Boredom Scale." After a series of psychological scale validity and reliability validations, a final 32-item version was determined, measuring seven dimensions. These studies provide essential tools for understanding and assessing the impact of boredom emotion in foreign language learning and lay the foundation for subsequent interventions and instructional strategy design.

4.3 The Impact of Boredom in Foreign Language Learning on Learning Outcomes

While exploring the conceptual connotations of boredom in foreign language learning and developing corresponding scales, Li et al. (2021) discovered that feelings of boredom can negatively impact both psychological and behavioral aspects of learning. However, since current research on foreign language boredom primarily focuses on causality, there is a lack of specialized investigation into its effects. Only one empirical study to date has verified this causal relationship, conducted in the context of the pandemic (Li Chengchen, Lu Xiaojun, 2022). Based on a sample of 348 students enrolled in online English courses at the university level, this study found that boredom had a moderate negative predictive effect on English exam scores ($r=-.298$, $p<.001$). Yet, the universality of this finding still requires further validation. On one hand, differences in online and offline learning environments may differently influence students' academic emotions and psychological processes (Li Chengchen, Han Ye, 2022), meaning that the negative predictive effect of boredom on English performance should be validated across different teaching modalities. On the other hand, as students of different age stages may exhibit distinct psychological characteristics, findings based on college student samples may not necessarily apply to elementary school students. Considering that higher education institutions in China are mostly concentrated in economically developed regions, further in-depth exploration is needed to determine whether these findings are applicable across regions with varying economic conditions, cultural backgrounds, and geographical locations.

5. Teaching Implications

To boost interest in English learning, reduce boredom, and enhance performance, teachers must focus on students' emotions and create positive experiences. This can be achieved by: Teacher's Attitude and Preparation: Adjusting demeanor and preparing both academically and mentally. Utilizing Diverse Teaching Methods: Including group discussions and multimedia. Enhancing Classroom Interaction: Leveraging technology to engage students. Understanding Student Needs: Regularly assessing and adapting to students' preferences. Personalized Tutoring: Tailoring guidance to individual needs and challenges. Strengthening Communication and Trust: Building strong relationships with students through regular interaction.

These strategies aim to enrich English learning, increase motivation, and enhance academic success. Implementation requires collaboration among teachers, students, and administrators to create an engaging and tailored learning environment. By integrating these approaches, stakeholders can transform English learning into an enriching experience, improving proficiency and combating boredom.

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New Historicism in Documentary---On CCTV's National Treasure

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Abstract: History, as a remembrance of a country's rise and fall, is hardly neglected by the public, through various ways. The once hit cultural exploration program *National Treasure* on CCTV once again inspired millions of people to pay their attention back to the country's glorious history. In the first season of the program, nine museums ranging from the Palace Museum to other eight major museums throughout China are participating, and each of which needs to select three most precious treasures in its museum to present its "previous history" and "present life". Through this form, this show aims to inspire more people to get involved in the ancient civilization and make the national treasures "come live".

Keywords: New Historicism; History; Documentary

1. The conversation between treasures and history.

Different from the normal documentary, *National Treasure* not merely retells the history behind each relic, but also tries to recreate the historical event, in order to make the relic "come live". Moreover, by presenting the present life of the culture relics, these relics along with histories are infused with new meanings. During these progresses, history and cultural relic are treated as texts, re-read and re-written by the producers.

1.1 Textuality of histories

According to the traditional critics, each cultural relic, as history, should be treated as an object, which conveys a part of history that cannot be changed. However, from the New Historicism perspective, when we are approaching to those treasures, they are presented as different texts. Though treasures, as a representation of history is presented to the public, "we can have no access to a full and authentic past, to a material existence that is unmediated by the textual traces of the society in question" (Montrose 409). Texts thus can only be treated as a medium to get close to the real history.

Taking the cultural relic Yunmeng Shuihudi Qinjian (Bamboo Slips of Shuihudi, Yunmeng County) in *National Treasure* as an example, those Bamboos Slips was discovered in one law officials named Xi. At that time, these bamboo slips were merely carriers of the law. Yet, when these slips were taken from the underground, the representations of these "texts" are changed. Bearing the marks of the Qin Dynasty, they provide perfect materials for historian to explore the law system, to obtain more details about the political, economic, and cultural situations at that time. Moreover, they are also considered as texts to study the ancient calligraphies. All of those readings are from the perspective of the historians and the archaeologist who are trying to use their specialties to present to the public a more professional knowledge about history. However, what really happened behind those bamboo slips can never be touched given that people cannot travel to the past.

1.2 Historicity of texts

"Texts are always produced out of a specific reality, and they bear the marks of their time, place, and mode of production. They are always to be understood as relating to historic and geographic specificity, both in terms of the moment when they are first produced and at the moment when they reproduced by our readings of them" (Wolfreys 48). Thus, when those cultural relics as texts are read by different people with different social or cultural background in different times, the content will be various since readers are restricted or influenced by their background.

In the documentary, the cultural relic presented by Hubei Museum is the most famous sword in Chinese history— Yuewang

Goujian Jian (Bronze Sword of Emperor Goujian). In this documentary, the sword is described as a dowry of Emperor Yue's daughter when she voluntarily chose to marry Emperor Chu in order to safeguard his father's state and dignity. Another version is considered the sword as a war trophy obtained by the Chu soldier. The scriptwriter chooses the first one over the second. Compared to the second one, the story of the sword from the first version would be presented in a much solemn and stirring way—a story of self-sacrifice. When taking the sword as a text, and read by contemporary audience, the content of the sword is enriched not only by the scriptwriter, but also the audience themselves. The caring of the emperor to his country, the sacrifice of the daughter, those sacred actions presented by the producer are perfectly in accordance with today's advocacy of the "core socialist values". That's might be what the producer want to convey through the history of the sword, but what other audiences can read from this text? Answers would also be various.

2. The Narrative Method of National Treasure

This program not only showcases the background stories of national treasures, but dedicates to create a tight bound between their histories and present situation, through different narrative methods.

2.1 The previous history of cultural relics

Traditionally, directors or producers of historical documentaries "repeatedly use the four elements: the historical picture (or video), the cultural relics, the witnesses of the history or the interview of the witnesses, and the voiceover" (Han 32) to retell history. By only presenting the objective historical relics, producers attempt to restore the true history. Nevertheless, the New Historicism critics believes that, history, under the influence of power relations, is meticulous chosen by the history recorder (Wu 38). Thus, new ways of retelling history gradually spring up.

In the documentary *National Treasure*, treasures are not presented in the way which only the origins or their representations are given to the audience. Instead, they are showed by the way of "scene reconstruction", which means that the history of the relics is shown by representing the situation at that time, giving audience a vivid illustration of the origin of the relic. However, as what is explained in the beginning of the show, each of the performance is "a proper adaption according to the acknowledged history". Just as what Wu Yujie says, "history, as a vast text, each scriptwriter can be treated as its reader and explainer" (31). In this sense, producers of the documentary have the full power to decide how to adapt the historical origin to the contemporary society according to their own understandings. However, each producer is inevitably influenced and shaped by the social ideology. Therefore, those "proper adaptations" are marked with the unique characteristics of the contemporary society. When the story of Zhenhouyi Bianzhong (Chime-bells from the tomb of Marquis Yi of Zeng State) is performed in the stage, the protagonist Zenghouyi says, "Yizhong shuangyin" (one bell, two sound, which means if you toll the Chime-bell from two different side, it can create two different sound), and stresses that the two different sounds are lying in the same bell, non-interfering with each other and in harmonious coexistence. From this explanation, the audience could promptly connect it with the country's longtime policy of "one nation, two systems". Take it into a larger context, the relation between two countries can also coexist harmoniously even though they might have different political or social backgrounds. That's what China has always called for since the establishing of the country. From this perspective, this treasure not only bears the history of the ancient time, but also be infused with the contemporary significance after reinterpreted by the producer.

3. The significance of the documentary

This show not merely aims to retell the ancient history to the public, but to make the national treasures "come alive" and revoke the national pride especially among the younger generations.

3.1 Revitalize the history

Just as what has been mentioned above, the ultimate mission of a documentary is never solely displaying what has been found in the past. It always has a purpose. "The New Historicism rediscovers the bound between the historical meaning and the reality...it makes the interpretation of the past becomes an enrichment of the present, and the discovery of the meaning to the past turns to the enlightenment of the contemporary world" (Wang 133). *National Treasure* links the past to the present world and histories of the relics are enriched by the present reading. Moreover, the new connotation transfused by the program gives an energetic life to the lifeless object. When history becomes alive, the communication between the history and the public will be increased. This documentary

provides a grand terrace for the public to get close to the national treasure. Through reading the ancient history of the relic, the audience now will have a deep impression of the country's long history. Through showcasing the present preservation and investigation, audience would also be attached by the professional dedications of the common people. By reading the past and the present story of those treasures, audience's national pride would surely be provoked.

3.2 Prevent the western culture penetration

When history and the present are tightly tied together, one group of people would be deeply influenced, that is the younger generation. As a generation which has been greatly benefit from the advanced technology and the input foreign cultures, their relationships with the nation's history seem to be looser and looser. To the younger generations, stick to the past becomes cliché and chasing the foreign western culture becomes a new trend. Nevertheless, they fail to recognize that that's one way for the western country to penetrate their values to the country, through which to strengthen their national power.

Yet *National Treasure* brings the young's attention back to the history. The stories of those historical relics are recreated by the producer by infusing contemporary characteristics. The audience would find more resonance in each of the story so that history is not the ancient story anymore. By receiving the stories created by the documentary, young people are unconsciously influenced by Chinese traditional culture. Once their national prides are provoked, they would gradually acknowledge the country's outstanding traditional cultures, thus would devote more of their time to the Chinese history.

Conclusion

National Treasure is definitely not the first documentary to use this creative way of presenting the history. However, it's creative method of showcasing the background stories of national treasures and the interconnection between history and the present certainly provide the audience a new way of getting familiar with the ancient treasures. Once the distance between the audience and the history disappears, and the history is accepted by more people, the nation's history will be passed through generations. Thus the country will be long standing in the world.

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TSCA on Students' Ability Toward Writing in Blended Learning of College English

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Abstract: English writing is an important output skill cultivated in college English courses. And in the age of informationization, college English writing teaching relies on the support of information technology. In order to cope with the solution of this dilemma, Production-Oriented Approach(POA) proposes Teacher-Student Collaborative Assessment (TSCA), which creates a new form of assessment. Through TSCA, teachers can not only alleviate the heavy teaching load, but also fully tap the network resources to efficiently use students' time before, during and after class to maximize and optimize the teaching effect. In this paper, the teaching concept of TSCA is used to conduct writing teaching experiments, to study and analyze the writing ability of students who write effectively, so as to provide insights for the practice of English writing teaching.

Keywords: TSCA; Writing Ability; Effective Evaluation

1. Introduction

China Education Modernization 2035 proposes accelerating educational change in the information age, building intelligent campuses, coordinating the construction of integrated intelligent teaching, management and service platforms, accelerating the reform of talent cultivation modes by using modern technology, and realizing the organic combination of scaled education and personalized cultivation. The development of network technology promotes the development of teaching concepts, teaching methods, teaching content and teaching assessment in English writing. According to Wang Shouren (2011), the Curriculum Requirements emphasize the organic combination of modern information technology and foreign language courses and the adoption of a new type of teaching mode. Most colleges and universities do not offer a separate college English writing course, and there is little time for classroom writing teaching. Teachers also overuse the traditional writing teaching mode and do not emphasize the application of information technology in writing teaching. However, for the development of students, English writing ability is undoubtedly vital as a large part of English language ability (Song Hao, 2016).

Over the years, frontline English teachers and related educational researchers have proposed a variety of pedagogies and means to cope with and solve students' problems in English writing. However, these pedagogies and means have had little effect. This is mainly because writing is a difficult language to learn. If students do not get systematic input training and follow-up supervision, it is difficult for students to rely on their learning initiative to achieve satisfactory results (Zhang Yi& Tao Lijun, 2018).

"Production - Oriented Approach (POA) is a foreign language teaching and writing theory proposed to address the shortcomings of "learning and use separation" in foreign language teaching in China. TSCA (Teacher-Student Collaborative Assessment) is a new method for POA(Sun Shuguang, 2020). It consists of three stages: pre-class, in-class and post-class. Before class, teachers select and review typical samples according to the teaching objectives of the unit. Inside the class, students think independently, then communicate in pairs/groups, and then have a large class discussion led by the teacher, who gives the pre-course prepared reviews at the right time. At the end of the lesson, on the basis of the teacher's in-class professional guidance, students supplemented the TSCA with self-assessment or peer assessment.

In this paper, the teaching concept of "TSCA" is used to conduct writing teaching experiments, to study and analyze the writing

ability of students who write effectively, so as to provide insights for the practice of English writing teaching.

2. Literature Review

Information technology has created informative learning styles, from E-learning (electronic learning, digital learning), to M-learning (mobile learning, mobile learning), to U-learning (ubiquitous learning, ubiquitous learning) (Chen Jianling & Jia Zhengxiao, 2017). In the age of informationization, university English writing teaching relies on the support of information technology. The development of network technology promotes the development of teaching concepts, teaching methods, teaching content and teaching assessment in English writing. Realizing the effective integration of English writing courses and information technology, developing a favorable network ecological environment for English writing teaching, and coping with all the challenges faced by university English writing teaching have been the urgent tasks of English writing teaching at present.

Shuang Dingfang (2011) views language learning as two parts: classroom learning and out-of-class learning. The five major functions of classroom teaching are as follows: (1) to cultivate students' interest in learning; (2) to create a favorable environment for language learning; (3) to provide learning resources; (4) to provide guidance on learning methods and strategies; (5) to help students overcome their learning difficulties; and (6) to provide opportunities for students to demonstrate their learning achievements. Effective classroom teaching in blended learning needs to fulfill functions such as the above. The relationship between classroom and extracurricular learning: language learning = classroom learning + extracurricular learning; classroom teaching = preparation for extracurricular learning; extracurricular learning = facilitation of classroom learning; methods and contents of extracurricular learning = learning + communication. The combination of offline and online learning is also what blended learning focuses on. Qi Yajun (2015) analyzed the effectiveness of foreign language classroom from the perspective of the Teaching Competition of Foreign Language Teaching Society. He believes that effective language teaching needs to take into account the humanistic, ideological and social aspects of language, rather than only emphasizing the instrumental aspects of language. He also analyzed the effective factors of teacher-student interaction in the classroom: mutual respect, listening to each other, suspending judgment, keeping an open mind, and being problem-driven, etc.; and its corresponding effective dialogue strategies: follow-up questioning, attentive listening, situational imagery, dynamic resource development and critical reflection. He also realized that the dominant factor in effective teaching is the teacher. Therefore, he advocates promoting the development of effective teaching through the development of teachers, i.e., the mechanism of experience conversion, the mechanism of motivation generation and the mechanism of institutional guarantee. Rethinking foreign language teaching with the concept of effective teaching. Qiao Shuxia (2011) believes that effective teaching is oriented to teaching goals, takes into account the effectiveness and efficiency of teaching, and emphasizes teaching reflection, so as to promote the scientific development of foreign language teaching in China and change the situation of "time-consuming and inefficient" foreign language teaching.

In the age of informationization, college English writing teaching depends on the support of information technology. The research on foreign language teaching in the twenty-first century is more and more characterized by ecology, field, synthesis and modernization (Chen Jianlin, 2004). The development of network technology promotes the development of teaching concepts, teaching methods, teaching content and teaching assessment in English writing. From 2009 to 2010, the Steering Committee of University Foreign Language Teaching of the Ministry of Education found through a survey of 427 schools that more than half of the universities had built special network rooms for English teaching. This facilitates the development of a new model of English teaching with computer network technology (Wang Shouren & Wang Haixiao, 2011). Realizing the effective integration of English writing courses and information technology, developing a favorable network ecological environment for English writing teaching, and coping with the challenges facing university English writing teaching have been the urgent tasks of English writing teaching at present. According to Wang Shouren (2010), "The Curriculum Requirements emphasize the organic combination of modern information technology and foreign language courses, and the adoption of new teaching modes. Although there are various ways to combine with foreign language courses, the basic point of the combination is to integrate computer network technology into college English teaching and to realize the "two basics", i.e., computer-based and classroom-based. The future direction of English course construction is inevitably: excellent teachers, coupled with modern information technology.

"Production - Oriented Approach (POA) is a foreign language teaching and writing theory proposed to address the shortcomings

of the "separation of learning and use" in foreign language teaching in China (Wen, 2015). TSCA is part of the POA system and can be realized within or outside the framework of POA (Sun, 2020). TSCA includes three phases: pre-class, in-class and post-class. Before the lesson, the teacher selects and reviews typical samples according to the unit teaching objectives. During the lesson, students think independently, then have pair/group exchanges, and then have a large class discussion led by the teacher, who gives timely comments on the pre-course prepared reviews. At the end of the lesson, on the basis of the teacher's in-class professional guidance, students use self-assessment or peer-assessment to supplement TSCA. Through TSCA, teachers can evaluate students' outputs before class to determine typical samples and evaluation focuses; assist students to evaluate typical samples during class; and after class, students conduct self-assessment, peer assessment and machine evaluation. Therefore, TSCA can effectively solve the problems of inefficiency and poor efficiency in traditional assessment methods.

Writing ability is the object of testing writing, which is the theoretical basis for proposing questions, developing writing ability scales as well as scoring criteria (Pan & Zou, 2020). Writing ability includes the ability of written expression and the knowledge of language learners or users. There is no consensus among scholars about the stage characteristics of English writing ability and its description. However, in recent years, scholars have become more and more clear about the description and research perspectives of English writing ability, namely, from the social cognitive perspective and the linguistic communication perspective. The social cognitive perspective views writing as a cognitive process (Hayes, 2012). The linguistic-communicative perspective, on the other hand, views writing as a communicative activity and focuses mainly on the intrinsic components of this activity (Bachman & Palmer, 2010; Council of Europe, 2001). In essence, writing ability is a practical ability, which is manifested through concrete language use (Pan & Zou, 2020).

There are few research designs on the evaluation of English writing ability at home and abroad, and even fewer studies on the evaluation of writing in the context of blended learning, and the only studies that have been conducted are limited to qualitative studies and lack quantitative studies supported by reliable data. TSCA's research focuses on the teaching of English writing. At the same time, the researchers of TSCA are also the lecturers. Therefore, this study is able to improve the practical application of TSCA theory at both the practical and theoretical levels. The study was conducted in all classes at the same level, not limited to the researcher's classes or to observing the classes taught by others. The results of this study are typical and can provide a reference value for the utilization of TSCA.

3. Research methodology

The choice of research method depends on the research question. The problem of this study is: students' ability towards effective English writing under the teaching concept of "TSCA". This is a problem of describing the current situation. The quantitative research method is more suitable for describing the current situation of a large sample. Quantitative research is "more suitable for large-scale investigation and prediction of things at the macro level" (Chen, 2000). This study focuses on the questionnaire survey to find out the improvement of TSCA on students' writing abilities from the students' perspective. In addition, when forming the measurement scale of effective writing instruction in blended college English, the author utilized the Delphi expert survey method to ensure the scientific validity of the scale.

3.1 Research Objects

Factors such as the determination of the research population, sample selection, sample size, and sampling strategy affect the quality of the data, which in turn affects the quality of the interpretation of the overall research data (Zheng & Wang, 2014). Theoretically, all the students of university English courses receiving blended teaching are the research subjects, that is, the theoretical totality. However, due to the limitations of human, material and financial resources, it is impractical to study the totality of the totality.

The implementation of blended teaching in university English courses can vary greatly due to the different levels of English learning among students. In order to highlight the effectiveness of the "TSCA" teaching concept applied to college English writing courses, the author purposely selected freshman B-level students (with a score of less than 90 out of 150 on the college entrance examination). There are 31 classes in the freshman B level, totaling 1,242 students. According to Raosoft's scientific calculation, in order to ensure the validity of the measurement is more than 95%, I surveyed 350 students in the form of questionnaire, in order to obtain the specific situation of the implementation effect of effective writing teaching under the teaching concept of "TSCA" from the

students' point of view, so as to better perfect the improvement of students' writing attitudes in the context of blended teaching in college English. In order to improve the students' writing ability in the context of blended teaching, the survey was conducted on 350 students.

3.2 Research Tools

In order to understand the current situation of students' ability towards English writing in blended teaching, an appropriate and effective evaluation tool is needed. The author compiles a variable questionnaire based on current literature and experts' opinions, then consults the literature to sort out the concepts and connotations of these variables, and compiles a variable questionnaire with reference to relevant questionnaires compiled by scholars at home and abroad that have been validated. This questionnaire consists of two parts. The first part is students' basic information, including gender, specialty, and English learning experience. The second part is writing ability(Adapted from "The Chinese English Language Proficiency Scale: A Study of the Writing Proficiency Scale" by Mingwei Pan & Shen Zou (2020)), which examines the current status of effective writing in terms of language knowledge, discourse knowledge, sociolinguistic knowledge, and strategic ability.

4. Research results and analysis

4.1 Reliability of the questionnaire

Table 1 Reliability Result

Questionnaires	Indicators	Cronbach Alpha	Remarks
Writing ability	1. Language Knowledge	0.707	Acceptable
	2. Discourse Knowledge	0.896	Good
	3. Sociolinguistic Knowledge	0.762	Acceptable
	4. Strategic Ability	0.856	Good

George and Mallery (2003) provide the following rules of thumb: “_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable

The mean internal consistency coefficient of the total scale was 0.805. The four indicators of writing ability was, in order: 0.707, 0.896, 0.762, and 0.856. The data showed that the questionnaire has high consistent reliability and internal validity for all variable sub-dimensions, indicating that the scale is suitable for investigation.

4.2 Questionnaire sub-dimensions

Table 2

Students' English Writing Ability in terms of Language Knowledge

Indicators	WM	VI	Rank
1. I can use common words to express on familiar topics.	2.60	Agree	5
2. I can choose appropriate vocabulary to express one's own ideas.	2.81	Agree	2
3. I can properly use commonly used fixed expressions, such as proverbs, idioms,etc.	2.66	Agree	4
4. I can use various sentence structures to express ideas.	2.54	Agree	6
5. I can correctly write the upper and lower case forms of all letters.	2.69	Agree	3
6. I can write the upper and lower case of letters correctly, although occasionally make some small mistakes.	2.86	Agree	1
Composite Mean	2.69	Agree	

Legend:3.50-4.00=Strongly Agree;2.50-3.49=Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Indicator 6 (2.86) is the highest score. It shows that students can differentiate the use of letter case in specific writing scenarios. In English writing, students need to capitalize or lowercase the initial letters of certain words depending on the content of the writing

(Pan, 2020). This indicates that the teacher emphasized the need for students to be aware of the effect of the content of the writing on the initial letters of certain words.

Knowledge of vocabulary involves questions one to three (2.69). Knowledge of syntax involves question 4 with a mean of 2.54. Knowledge of graphology involves questions 5 to 6 with a mean of 2.76. Students can use appropriate vocabulary, syntax and graphology in English writing according to the topic of writing. Language knowledge includes knowledge of vocabulary, knowledge of syntax and knowledge of graphology (Pan, 2020). The students' ability to express language affects their ability to use their knowledge of the relevant language to express information.

Table 3
Students' English Writing Ability in terms of Discourse Knowledge

Indicators	WM	VI	Rank
1. I can use simple conjunctions or transition words to connect sentences in the text.	2.91	Agree	1
2. I can effectively use cohesion means to make the expression of text sentences coherent and appropriate.	2.80	Agree	2
3. I can organize chapters reasonably and meet the genre requirements of specific tasks.	2.65	Agree	5
4. I can compose familiar texts in simple and coherent sentences.	2.73	Agree	3
5. I can effectively use linking words and sentences in complex text writing.	2.66	Agree	4
6. I can write clear, organized and detailed articles.	2.54	Agree	7
7. I can write clear and fluent texts in an appropriate and effective style and logical structure	2.56	Agree	6
Composite Mean	2.69	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Indicator 1 (2.91) is the highest score; it shows that students can choose simple appropriate conjunctions or transition words according to the logic of the content of the essay, which shows that in actual writing students can not only grasp the theme of the essay, but also connect the context with the content of the essay by choosing appropriate conjunctions or transition words. Through these conjunctions or transition words, students' compositions tend to be more hierarchical, and the contents of the compositions seem to be more structured (Pan, 2020).

Indicators 6 (2.54) and indicator 7 (2.56) got the lowest score. It implies that although students can use simple conjunctions or transition words to organize their language and use simple topic statements to develop their writing, it is difficult for them to grasp the logic, fluency and detail of the writing as a whole. As a result, the students could only use simple and limited connectives and topic statements in their writing. The limited vocabulary made it difficult for students to develop their writing (Pan, 2020).

Table 4
Students' English Writing Ability in terms of Sociolinguistic Knowledge

Indicators	WM	VI	Rank
1. I can use language appropriately as needed.	2.58	Agree	4
2. I can understand the writing characteristics of formal and informal texts.	2.62	Agree	2
3. I can notice differences in cultural customs in writing.	2.62	Agree	2
4. I can choose different language forms according to the target culture and social customs in writing, and express your own views, emotions, and attitudes appropriately.	2.62	Agree	2
Composite Mean	2.61	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49 = Strongly Disagree

Table 4 presents the composite mean of 2.61. Socio-cultural knowledge involves questions 1 to 2, with a mean value of 2.6. Socio-cultural knowledge is the knowledge of the society and culture of the target language. Cross-cultural knowledge involves questions 3 to 4, with a mean value of 2.62. Cross-cultural knowledge means understanding the similarities and differences between the culture of the native language and the culture of the target language. Such knowledge usually refers to general knowledge of life, understanding of life, interpersonal relationships, values and so on (Pan, 2020). Students have to distinguish between formal texts and informal texts in actual writing.

Table 5			
Students' English Writing Ability in terms of Strategic Ability			
Indicators	WM	VI	Rank
1. I can sort out the main ideas or information of the literature before writing.	2.65	Agree	6
2. I can prepare for writing in various ways, such as discussion, drafting an outline, listing key points etc.	2.66	Agree	5
3. I can list the main points and keywords required by the written text in order to write the article.	2.72	Agree	4
4. I can correct inappropriate language expressions and coherence problems.	2.75	Agree	3
5. I can get help from classmates or teachers to improve the quality of writing and the accuracy of writing content.	2.88	Agree	2
6. I can use (electronic) dictionaries, automatic functions of word processing software and associative functions of input methods to improve writing quality and efficiency.	2.92	Agree	1
Composite Mean	2.76	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49 = Strongly Disagree

Table 5 presents the composite mean of 2.76. Indicator 6 (2.92) is the highest score. This indicates that students have imbibed the habit of using their phone installed dictionaries with translation. Hence, they can easily give synonyms, also antonyms and other word derivations whenever necessary inside classes. At the beginning of writing, the informatized writing platform system will clarify the writing ideas and writing framework for students, and provide students with words that may be used as reference during the writing process (Ji, 2022). Strategies are the action steps that language users/learners take to ensure that communication activities run smoothly (Pan, 2020). It consists of four steps: planning, implementation, evaluation, and refinement. In the case of writing activities, strategy is expressed in preparation and planning, drafting and monitoring, and evaluation and revision. Preparation and planning relates to questions 1 to 2; drafting and monitoring relates to question 3; and evaluation and revision relates to questions 4 to 6.

Indicator 1 (2.65) and indicator 2 (2.66) are the lowest scores. Both indicators belong to preparation and planning. This shows that students do not do a good job of gathering information in English writing, such as finding the center sentence of the essay topic, discussing the content of the essay topic and outlining the core content of the essay. Strategies are the action steps that language users/learners take to ensure the smooth running of communication activities. In writing activities, strategies are specified as conceptualization, writing and revision (Pan, 2020).

5. Conclusion of the study

Table 6			
Summary on Students' English Writing Ability			
Key Result Areas	Composite Mean	VI	Rank
Language Knowledge	2.69	Agree	2.5
Discourse Knowledge	2.69	Agree	2.5

Sociolinguistic Knowledge	2.61	Agree	4
Strategic Ability	2.76	Agree	1
Grand Composite Mean	2.69	Agree	
<i>Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49 = Strongly Disagree</i>			

Overall, the Output Oriented Approach favors the improvement of students' linguistic knowledge, discourse knowledge, sociolinguistic knowledge, and strategic competence. The Composite Mean of the four sub-domains, in descending order, was: strategic competence (2.76), language knowledge (2.69), discourse knowledge (2.69), and sociolinguistic knowledge (2.61). Among them, the improvement of strategic competence is the most obvious. This suggests that POA provides the best solution for students' English writing, which is conducive to the efficient improvement of students' writing in the initiation, execution, and evaluation and revision phases of writing. Therefore, it shows that POA improves students' English writing ability.

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The Selection of Material in Extensive Reading Program

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Abstract: Extensive reading has enjoyed the increasing popularity from L2 educators as a potentially effective form of L2 reading instruction. However, many researchers tend to ignore the importance of selection of material. The paper is an attempt to explore the appropriate criteria of qualified graded readers, which can be helpful for English teachers and learners in ER program.

Keywords: Extensive Reading; Graded Readers; Selection of Material

1. Introduction

One of the crucial factor in Extensive reading program is nothing but the selection of material. A diversity of materials can be selected as ER materials, such as language learner literature, children's books, learners' own stories, newspapers, magazines, children's magazines, popular and simple literature, young adult literature, comics, and translations (Day & Bamford, 1998: 97). Among these, the most widely used is language learner literature called 'graded readers.' Basically, Graded readers are books written for learners of English using limited lexis and syntax, the former determined by frequency and usefulness and the latter by simplicity (Hill, 2008). There are different kinds of series across the worldwide market, such as *Cambridge English Readers*, *Oxford Bookworms*, *Penguin Readers* and so on. In addition, there are two types of graded reader: the rewrite and the simple original. Although there has long been a heated debate on Graded readers, they are the most suitable materials which are able to provide sufficient and comprehensible input for different students in junior high school.

2. Materials to be used

2.1 Reasons for using graded readers

2.1.1 Appeal of fiction

It is true that people can learn by reading, but they would feel frustrated to read boring and difficult books. According to EPER Database, the majority of titles are fiction. Hill (2008) states the advantages of fiction are that the context is universal and a combination of narrative and dialogue much easier to read than expository prose. Moreover, those story-based books which functions as films bring new flavor of input resources to students and color students' daily life. Ultimately, students' willingness to continue reading will be increased dramatically.

2.1.2 Wide range of series to provide a sufficient quantity of varied input

On the other hand, graded readers characterized as a diversity of titles ranging from child classic legends to horrible stories provide various inputs to maintain students' spontaneous interest and cater for students' different tastes. Take the series of Oxford Bookworms as an example; there are more than 200 titles in current market. More importantly, the admirable consistency of linguistic level within stages provides pupils ample opportunities to build up their competency in a coherent and stable fashion.

2.1.3 Providing appropriate books with individual student

The two reasons above only reveals that graded readers are able to deliver a large quantity of inputs, but the problem lies in how to ensure that the books chosen by students are in their comfortable zone so that they can read fluently. From this perspective, the combination of Graded readers and EPER Test is vital to allocate the most suitable books for individual pupils in mixed level classes. The principle behind is that the students' performance in the EPER Test will enable the class teacher to assess which level each student

is capable of starting at. In this sense, ER is a concept that not only highly values reading as a private exercise but also respects individual differences. On contrast, without this “matching system”, students are likely to try to read above their comfort level, not for enjoyment but because they think it is the best way to make progress by enlarging vocabulary. What is even worse, those who are equipped with the motto termed as “no reading pain, no reading gain” may stick the suffering of struggling to continue reading or uninteresting texts, believing that stopping and changing the material is an admission of defeat. This is a symptom of what might be called the “macho maxim of second language reading instruction”. In all, the “matching system” plays the determining role in providing comprehensible input for each student.

2.2 Reasons for using class readers

Using class readers means that all the students in a class works on the same book at the same time. Armed with a decent budget, I intend to use class readers for its two benefits. At first, teacher can make full advantage of the chance to present exactly how to actually read extensively as well as check the process. This is particularly true for those who are not equipped with autonomy. Secondly, it provides an interesting ‘alterative reality’ the whole class can share. In short, using class readers is one of the most effective strategies in scaffolding students and engaging them in a reading community, particularly in the initial stage. However, it is not easy for a project manager to make the final decision on readers when facing a large variety of series flooding in the market. therefore, it is wise to make decisions on the EPER databas from series of Oxford Bookworms.

3. Material management

3.1 The reasons for establishing class library rather than central library

As long as the books are decided, the next consideration , which is equally vital for ER programmes is how to establish an elaborate system to manage and maintain materials, which is a crucial element in ER programmes. Hill(1991:81) states that “it is the scarcity of proper system of management that attribute most to the clash of schemes started by enthusiasts” Although the idea of setting up both central library and class library is strongly recommended, it is unrealistic to create a central library in this case for two reasons. At first, the geographical location of the main library in the school is so remote that it takes at least twenty minutes to get there. Secondly, the shortage of full-time librarians is another concern. Therefor , I will discuss the measures of establishing a dynamic class library.

3.2 Managing books in class library

Many ER experts hold the view that it is class teacher’s responsibility to design a class library system and run it smoothly. However, reflected on my experience, it can be more feasible and efficient if teachers empower the students to take the responsibility. Firstly, dealing with hundreds of books in one classroom can be a huge challenge for most teachers who are struggling with massive curriculum work. More importantly, such transformation serves to trigger students’ motivation and promote their engagement. In addition, based on my experience, in spite of pupils’ young age, any task can be completed excellently by students’ determination and commitment if teachers trust them. Therefore, rather than detailing management techniques, I will deliver some basic strategies, leaving more space for students to explore. Overall, there are four areas in the creation of the system that have to be taken into account.

4. Conclusion

To some extent, the success of this ER programme can be largely influenced by the appropriate selection of material and its management. Besides, it is vital to take measures to increase students’ engagement and motivation, such as “empowering students” to manage class library. In terms of the future exploration on this topic, EFL teachers should follow the path and pay more attention to the implementation of ER programmes in hundreds of Chinese Universities , which deserves our endeavor as well in the future.

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An Analysis of the Reasons and Countermeasures for the Weak Awareness of Intellectual Property Protection Among College Students

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Abstract: Entering the era of knowledge economy, various academic researches are blossoming under the social environment of double creation, but looking at the disputes of intellectual property cases in recent years, most of them happen in the college students group, the reasons for this phenomenon can be summarized as the blurring of the intellectual property education program, the system is too traditional and conservative, and the teaching concept is thin and so on. In view of this phenomenon, the author proposes to cultivate the intellectual property education of university students in the mode of "three constructions", so as to stimulate the vigor of social innovation and provide theoretical support for the scientific and technological research of university students.

Keywords: Intellectual Property; Innovation and Entrepreneurship; Education; University Student Population

Introduction

After the reform and opening up, China has made remarkable achievements in various fields, and the "science and technology is the first productive force" put forward by Comrade Deng Xiaoping in 1988 according to the development trend of China at that time has pushed the theory of scientific research in China to a brand-new stage, and entered the era of knowledge-based economy, and in the environment of national dual-creation. All kinds of scientific research and academic achievements have made great achievements, on how to protect all kinds of academic achievements, our country has been continuously improving the intellectual property protection mechanism, but the implementation of social practice, the results are very little, contemporary college students as the future development of the country's backbone, and the main force of the dialogue with the times, the protection of intellectual property rights awareness is very weak, only in recent years, patent disputes, there are about half of the cases occurring in the college student group. Only in recent years, about half of the patent dispute cases happened in college students, so it is urgent to improve the awareness of college students about the protection of intellectual property rights.

1. Weak awareness of intellectual property rights among the university student population

1.1 Ambiguity in talent development programs

Intellectual property education in colleges and universities is a crucial link in the cultivation of college students' aesthetic education. With the continuous transformation of China's economic development model, the reform of the education system to encourage dual-creation by entrepreneurship-led employment requires that colleges and universities cultivate a group of composite talents who know, understand, guard and use intellectual property rights, however, at present, there is a certain deviation in China's colleges and universities' education positioning for intellectual property rights from the development needs of the country and the society.

1.2 A single teaching team and an overly traditional education system

As the guide of college students' employment and innovation, college teaching team plays a pivotal role in improving college students' awareness of intellectual property protection. At present, although China's university teaching team has rich theoretical

knowledge and academic achievements in intellectual property research, it lacks the practical ability to transform the theory into actual teaching, and most of the education teams routinely invite social alumni and famous enterprises to carry out short-term academic lectures on university students, but most of the contents of the lectures come from a single textbook, and lack of practical contact with the companies and enterprises. The content of the lectures is mostly from single textbooks, which lacks practical connection with the companies in which they are located, thus most of the lectures on intellectual property rights are superficial and formal. In addition, the vast majority of teachers in our country still adopt the traditional one-sided teaching mode, and the teaching mode of emphasizing theory but not practice runs through the teaching classrooms of the universities, and it is difficult to mobilize the students' intellectual property thinking in the dual-creation by only relying on the lectures on the promotion of the law and theoretical lectures and competitions.

1.3 Weak concepts of intellectual property education

As early as 2008, China introduced the policy of intellectual property rights, aimed at emphasizing the importance of intellectual property rights, but due to a variety of reasons, the education authorities did not formulate relevant measures to implement this policy^[2], the concept of intellectual property education in China during this period is backward, along with the social environment of double creation continues to deepen, November 30, 2020, General Secretary Xi Jinping put forward the "comprehensively strengthen the protection of intellectual property rights and promote the construction of a new development pattern", this vision has increased the importance of people for intellectual property rights and widely publicized. "comprehensively strengthen the protection of intellectual property rights, and promote the construction of a new pattern of development", this vision has raised the high importance of intellectual property rights and widely publicized, but the popularity of the term "intellectual property rights" can only show that the whole society has a preliminary understanding, it does not mean that people have a good understanding of the underlying concept of intellectual property rights. However, the popularization of the term "intellectual property rights" only indicates that the whole society has a preliminary understanding of it, but does not mean that people are familiar with a series of laws, regulations and systems behind it.

2. Creating a Three "Building" Model to Raise Awareness of Intellectual Property Protection among University Students

2.1 Creation of the "Iron Triangle" Talent Cultivation Model

Universities and colleges should clarify the positioning of talent cultivation, abandon the cultivation of highly educated talents as the ultimate goal, and emphasize the trinity of talent cultivation mode from the intellectual property education of college students themselves, scientific research colleges and universities as well as social alumni and enterprises in the cultivation process of educating people to become talents. For college students, especially those who are willing to innovate, they should pay attention to the study of intellectual property education, read more books, understand the disputes about intellectual property cases in recent years, and improve their awareness of intellectual property protection.

2.2 Constructing a "double integration republican" model of theory and practice

As for college students, in order to improve their awareness of intellectual property protection, it is necessary for colleges and universities and enterprises to combine the theory and practice of law, which has been put in the "air", with the actual situation of the development of their own schools and enterprises, and to emphasize the practical teaching link. For social enterprises, on the one hand, the advanced information and technical achievements of enterprises can be transformed into teaching practice to help college students grasp the changing needs of the intellectual property market in a timely manner; on the other hand, they can reach a consensus on cooperation with higher education institutions to establish innovation and entrepreneurship industrial parks to incubate intellectual property achievements, integrate enterprise theories into the employment guidance of college students, select reserve talents and realize a win-win situation.

3. Raising awareness of intellectual property protection among university students is important for national strategic development.

3.1 Provide more reserve talents for building our country into an innovative nation

In 2006, the National Conference on Science and Technology put forward the strategy of independent innovation and the construction of an innovative country, and the promulgation of the Outline of the National Medium- and Long-term Scientific and Technological Development Plan (2006-2020) heralded China's entry into the beginning of the construction of an innovative country.

China's proposal to build an innovative country is a major decision made under a comprehensive analysis of the situation at home and abroad and in the light of China's national conditions: since the reform and opening up, China has continuously increased its investment in the construction of material civilization and spiritual civilization, and the living standards of the Chinese people have continued to improve, great achievements have been made in economic development, and the international competitiveness has been increasing.

3.2 The need to improve the socialist market economic system with Chinese characteristics

Resource allocation based on the market, the market is the most important means of regulation, so each market entity in order to obtain the maximum profit, will inevitably use various means of profit in the market competition, in recent years, the state for the protection of intellectual property rights gradually increased, but there are still many profitable behaviors in the grey area, for example, in recent years with the network media platform and the new "film Narrating industry", by intercepting the original film and television works of audio and video with text narrative published on the network platform for profit, this kind of behavior does not have the specific proprietary nature of intellectual property rights and non-material, compared with the original work only through the language of the description, and there is no fundamental innovation in the content of the generation of this kind of behavior in a certain sense belongs to the infringement of rights and the subject of infringement is usually the university students. Such behavior is in a certain sense an infringement of copyright, and the subject of such infringement is usually the university student population.

4. Concluding remarks

Strengthening the cultivation of intellectual property rights and improving the intellectual property education of college students is not only an urgent need under the environment of innovation and entrepreneurship, but also a need to improve the comprehensive quality of college students and stimulate their own enthusiasm for innovation, so that college students can use the legal weapons to protect their copyrights, industrial property rights and other legitimate rights and interests, and enjoy the fruits of their own intellect, which is more conducive to stimulate the atmosphere of the social scientific research and forcing enterprises to optimize the industrial chain structure and realize the transformation and upgrading. Optimize the industrial chain structure, realize the transformation and upgrading, but for how to strengthen the cultivation of intellectual property rights of college students, we need individuals, all walks of life as well as the state to abandon the traditional teaching ideas, to the "three construction" as the center for the establishment of a modern and innovative country to provide a steady stream of intellectual support.

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The Structural and Semantic Features of English Mass Media Neologisms from Perspective of Psycholinguistics

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Abstract: This study is of great significance for understanding the formation and understanding mechanism of new words in English mass media, and also provides a reference for the application of psycholinguistics in vocabulary research.

Keywords: Psycholinguistics; Mass Media; Neologisms; Structural Features; Semantic Features

1. Introduction

1.1 Research Background

The emergence of mass media neologisms is closely tied to the rapid development of technology and the ever-changing nature of society. With the advent of the internet and social media, information spreads faster than ever before, and new ideas and concepts emerge at an unprecedented rate. As a result, the media needs to constantly innovate and come up with new words and phrases to capture the attention of their audience and convey complex ideas in a concise and accessible manner.

1.2 Research Purpose and Questions

With the rapid advancement of technology and the increasing influence of mass media, new words are constantly being created to describe new concepts, phenomena, and trends. Therefore, it is important to examine the characteristics of these neologisms in order to gain a deeper understanding of their linguistic and cognitive processes.

The research questions that will be addressed in this study include:

1. What are the structural features of English mass media neologisms?
2. How do English mass media neologisms impact language and communication?

1.3 The Significance of Research

Firstly, understanding the structural and semantic features of neologisms in mass media helps us to comprehend the ever-evolving nature of language. Secondly, studying mass media neologisms allows us to explore the cognitive processes involved in language production and comprehension. Furthermore, understanding the structural and semantic features of mass media neologisms is essential for effective communication. Lastly, the study of mass media neologisms can have practical implications for language teaching and learning.

2. Literature Review

2.1 The Origin and Formation of Neology Terminological Basis

The origin and formation of neology is a crucial topic in the study of linguistics and psycholinguistics. Neologisms refer to newly coined words or expressions that emerge in a language. They can be created through various processes such as borrowing, derivation, compounding, blending, and abbreviation. Understanding the terminological basis of neology is essential for analyzing the structural and semantic features of English mass media neologisms.

The formation of neologisms can be influenced by several factors. One important factor is social change. As society evolves and new concepts and technologies emerge, the need for new words arises. For example, with the development of technology, words like

"internet," "blog," and "selfie" have become common in everyday language.

Another factor that contributes to neology is language contact. When different languages come into contact, words from one language can be borrowed and integrated into another language. This process is known as lexical borrowing and has resulted in the adoption of words such as "sushi," "karaoke," and "feng shui" into the English language.

Derivation is another common process in neology. By adding affixes to existing words, new words with different meanings can be created. For instance, the addition of the suffix "-gate" to words like "Watergate" and "Climategate" has become a common way to indicate a scandal or controversy.

Compounding is also widely used in the formation of neologisms. It involves combining two or more words to create a new word with a different meaning. Examples of compound neologisms include "cyberbullying," "selfie stick," and "fake news."

Blending is a process that involves combining parts of two words to create a new word. This often occurs when two words become commonly used together and are eventually blended into one word. Examples of blended neologisms include "brunch" (breakfast + lunch) and "motel" (motor + hotel).

Abbreviation is another method of creating neologisms. By shortening words or phrases, new words are formed. For example, "text" (short for "text message") and "app" (short for "application") are common abbreviations used in modern language.

2.2 Classification of Neologism

Neologisms, as newly created words or phrases, play a significant role in reflecting the dynamic nature of language. They emerge in various domains, including mass media, which is a major source of neologisms in contemporary English. The classification of neologisms is crucial in understanding their structural and semantic features.

One way to classify neologisms is based on their formation processes. Neologisms can be formed through derivation, compounding, blending, borrowing, acronymization, or conversion. Derivation involves adding affixes to existing words to create new forms, such as "unfriend" (formed by adding the prefix "un-" to the word "friend"). Compounding combines two or more words to form a new word, like "brunch" (a blend of "breakfast" and "lunch"). Blending involves merging parts of two words to create a new word, as seen in "smog" (a blend of "smoke" and "fog"). Borrowing involves adopting words from other languages, such as "sushi" from Japanese. Acronymization refers to creating a word from the initials or letters of a phrase, like "LOL" (laugh out loud). Conversion involves changing the part of speech of a word without modifying its form, such as "to Google" (using the noun "Google" as a verb).

Another way to classify neologisms is based on their semantic categories. Neologisms can be categorized into lexical neologisms and semantic neologisms. Lexical neologisms introduce new words into the vocabulary, while semantic neologisms involve the creation of new meanings for existing words. For example, the word "tweet" originally referred to the sound made by birds but has now gained a new meaning as a verb related to social media.

Furthermore, neologisms can be classified based on their frequency of use and acceptance. Some neologisms become widely adopted and integrated into the language, while others remain limited to specific contexts or subcultures. The classification of neologisms helps in understanding their linguistic characteristics, usage patterns, and cultural implications.

2.3 Lexical Meaning of The Word

The lexical meaning of a word refers to its basic, dictionary definition. It is the meaning that is associated with the word in isolation, without considering its context or usage. Understanding the lexical meaning of words is crucial for effective communication and language comprehension.

In the context of neologisms in mass media, the lexical meaning of a newly coined word plays a significant role in conveying the intended message and capturing the attention of the audience. These neologisms often emerge to describe new concepts, technologies, or social phenomena that have not yet been widely recognized or established in the language.

The lexical meaning of a neologism can be derived from various sources. It may be formed by combining existing words or morphemes, creating a compound or a blend. For example, the term "infotainment" combines the words "information" and "entertainment" to describe media content that combines news and entertainment elements. Another example is "staycation," which combines "stay" and "vacation" to refer to spending time off from work at home or within one's local area.

Additionally, the lexical meaning of a neologism can also be created through the use of metaphor or analogy. For instance, the term "viral" is used to describe content that spreads rapidly and widely on the internet, drawing a parallel with the way a virus spreads in the body.

3. Theoretical Framework

3.1 Mass Media: Characteristics and Functions

Firstly, mass media is characterized by its wide reach and accessibility. It has the ability to transmit information to a large number of people simultaneously, regardless of geographical boundaries. This allows for the rapid dissemination of news and other forms of media content. Additionally, mass media is highly accessible, as it can be easily accessed through various technological devices, such as smartphones and computers.

Secondly, mass media serves several important functions. One of the primary functions is to inform the public about current events and provide news coverage. This helps individuals stay informed and knowledgeable about local, national, and global affairs. Mass media also acts as a platform for entertainment, offering a wide range of content, including movies, TV shows, and music. Moreover, mass media serves as a tool for advertising and marketing, enabling businesses to promote their products and services to a large audience.

Furthermore, mass media plays a significant role in shaping public opinion and influencing social and cultural trends. It has the power to shape public discourse and influence public opinion on various issues, such as politics, social justice, and environmental concerns. Mass media can also contribute to the formation of cultural identities and the dissemination of cultural values.

3.2 Structural Features of Mass Media Neologisms

Mass media neologisms exhibit unique structural features that differentiate them from traditional words in the English language. These structural features play a crucial role in the formation and understanding of these newly coined terms.

Firstly, mass media neologisms often involve the combination of existing words or the modification of existing words to create a new term. This process, known as compounding, allows for the creation of catchy and memorable words that can quickly become part of the public lexicon. For example, the term "infotainment" combines the words "information" and "entertainment" to describe a type of media content that blends news and entertainment.

Secondly, mass media neologisms frequently employ truncation or abbreviation to create shorter and more concise terms. This is particularly evident in the use of acronyms and initialisms. For instance, the term "LOL" (laugh out loud) originated from internet communication and has now become widely used in various forms of media.

Thirdly, mass media neologisms often involve the creation of portmanteau words. A portmanteau is a linguistic blend of two or more words, where parts of the words are combined to form a new term. For example, the term "Brangelina" combines the names of the Hollywood actors Brad Pitt and Angelina Jolie, representing their celebrity couple status.

Furthermore, mass media neologisms may also involve the adoption of foreign words or phrases into the English language. For example, the term "karaoke" originated from Japan and has now become a common term in English to describe a form of interactive entertainment.

4. Research Methodology

Firstly, a corpus of English mass media neologisms will be compiled from various sources, such as newspapers, magazines, and online media platforms. The corpus will include a diverse range of neologisms, covering different domains and topics within the mass media context.

Next, the structural features of the neologisms will be analyzed. This will involve examining their word formation processes, such as affixation, compounding, and blending. The frequency of different structural patterns will be calculated to determine the most common ways in which neologisms are formed in the mass media.

Furthermore, the semantic features of the neologisms will be investigated. This will involve analyzing the meanings and connotations associated with the neologisms. Semantic analysis methods, such as collocation analysis and semantic field analysis, will be used to identify the semantic associations and patterns present in the neologisms.

To ensure the reliability and validity of the findings, intercoder reliability tests will be conducted. This involves multiple

researchers independently coding a subset of the data and comparing their results. Any discrepancies will be resolved through discussion and consensus.

5. Conclusion

The findings of this study have implications for both linguistics and mass media studies. From a linguistic perspective, understanding the structural and semantic features of mass media neologisms contributes to the knowledge of language evolution and creativity. It also sheds light on the relationship between language and society. From a mass media studies perspective, the analysis of these neologisms provides insights into the role of language in shaping public opinion and influencing societal discourse.

In conclusion, this research contributes to the understanding of English mass media neologisms and their linguistic characteristics. It highlights the importance of considering both the structural and semantic aspects of these neologisms in analyzing their functions and effects in mass media communication. Further research can delve deeper into the psycholinguistic processes involved in the creation and reception of these neologisms, as well as their impact on language change and social dynamics.

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Exploration of Evaluation Method for Achievement of Learning Effectiveness Based on Virtual Reality Technology

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Abstract: This article explores a method for evaluating the achievement of learning effectiveness based on virtual reality technology. The research analyzed the design and construction of a virtual learning environment, data collection of learner behavior, data analysis and evaluation methods, evaluation indicators and personalized feedback, as well as a case study of a virtual learning evaluation system. By using virtual reality technology to create an immersive learning environment, learners can gain an immersive learning experience, and evaluators can accurately record learners' behavior and performance. The learning effectiveness evaluation method based on virtual reality technology can improve learning effectiveness and teaching quality, promote educational innovation and development. These research results are of great significance for the evaluation of virtual learning effectiveness and personalized teaching in the field of education.

Keywords: Degree of Achievement of Learning Outcomes; Evaluation Method; VR

1. Background Introduction

In the current information age, the field of education is gradually benefiting from the popularization and in-depth application of information technology. Educational institutions and learners both pursue the use of information technology to improve learning outcomes and teaching quality. Information technology not only plays a positive role in the learning process, but also plays a crucial role in evaluating and providing feedback on learning outcomes. It can guide learners' learning process and improve educational practices. In this context, exploring methods for evaluating the achievement of learning outcomes based on virtual reality technology has become particularly important.

In the academic community, some studies have explored learning effectiveness evaluation methods based on virtual reality technology. For example, Professor Otto Peters from Germany proposed a learning effectiveness evaluation method based on virtual laboratories, which evaluates learners' experimental skills and knowledge mastery through their behavioral data in virtual laboratories. In addition, Liu Qianying from Shandong First Medical University studied a language learning environment based on virtual reality technology and proposed a learning effectiveness evaluation method based on speech recognition and emotion analysis [2].

Previous research has demonstrated the potential of virtual reality technology in learning effectiveness evaluation. However, there are still some challenges and issues, such as the design and construction of virtual learning environments. Therefore, this study will further explore these issues and propose a more comprehensive and accurate evaluation method for learning effectiveness based on information technology.

2. Design and Construction of Virtual Learning Environment

In order to evaluate learning effectiveness and provide personalized learning assessments, we need to design and construct a virtual learning environment suitable for specific learning domains. Generally, the following design points and principles can be referenced to ensure that learners can achieve a highly immersive learning experience.

Firstly, we need to conduct a needs analysis to understand the characteristics of learners, learning objectives, and subject characteristics. This includes determining the learning content, teaching objectives, and learning tasks, as well as determining the

virtual environment functions and interaction requirements required by learners.

Secondly, attention needs to be paid to the design and construction of virtual environments. Based on the results of the requirements analysis, we can start designing the various components of the virtual learning environment. This includes the selection and design of virtual scenes, the creation of virtual characters and objects, and the definition of interaction methods. After the design is completed, we can use relevant software and tools to build a virtual learning environment.

In the process of building a virtual environment, we also need to pay attention to user interface and interaction design. The user interface should be intuitive, easy to operate, and provide clear guidance and navigation, as well as interactive ways to interact with objects in the virtual environment.

Finally, after the construction of the virtual learning environment is completed, we need to test and optimize it. This includes testing the stability and performance of the virtual environment, collecting user feedback and opinions, and making further improvements and optimizations based on the feedback results.

Through the above design and construction steps, we can create a virtual learning environment similar to the actual learning scene, providing learners with a more immersive learning experience. The design and construction of a virtual learning environment is a key step in achieving evaluation of learning effectiveness based on information technology.

3. Learner behavior data collection

In order to obtain accurate and detailed evaluation results of learning effectiveness, we need to collect behavioral data of learners in a virtual learning environment. The following are the methods and related precautions for collecting learner behavior data to ensure the effectiveness and reliability of the data.

Sensors and devices: In a virtual learning environment, multiple sensors and devices can be used to collect learner behavior data. For example, a headworn monitor can track learners' head movements and gaze points, a handle or glove can record learners' hand movements, and a heart rate monitor can monitor learners' heart rate changes.

Behavior data recording: in the virtual learning environment, various behavior data of learners can be recorded, such as head movements, hand movements, fixation points, heart rate changes, etc. These data can be obtained in real-time through sensors and devices, and stored in a database for subsequent analysis. It should be noted that reasonable calibration and verification should be carried out during the data recording process.

Behavior data analysis: The collected learner behavior data needs to be analyzed to extract information about the learning process and learning outcomes. Behavioral data can be processed and interpreted using methods such as data mining, machine learning, and statistical analysis.

Data privacy and ethics: When collecting learner behavior data, it is necessary to strictly comply with relevant data privacy and ethical regulations. It is necessary to ensure the anonymity and confidentiality of data, and obtain the informed consent of learners. At the same time, it is necessary to process and store data reasonably to ensure its security and compliance.

4. Data analysis and evaluation methods

In order to accurately evaluate learning effectiveness, we need to use appropriate data analysis and evaluation methods. These methods can provide strong support for the evaluation of learning effectiveness based on information technology.

Descriptive statistical analysis: Descriptive statistical analysis is a method of describing and summarizing learner behavior data as a whole. By calculating statistical indicators such as mean, standard deviation, and frequency distribution of data, we can understand the behavior patterns and trends of learners.

Correlation analysis: Correlation analysis is used to discover the correlations and patterns between learners' behaviors. By analyzing learner behavior data, we can determine the correlation between different behaviors, which can help us understand the causal relationship between learner behavior and learning outcomes, and provide targeted improvement strategies and suggestions.

Machine learning methods: Machine learning methods can be used to construct predictive models and predict learning outcomes by learning patterns and patterns of learner behavior data. Common machine learning algorithms include decision trees, support vector machines, neural networks, etc.

Learning effectiveness evaluation: Learning effectiveness evaluation is a method of objectively evaluating learners' learning

effectiveness. By comparing with pre-set learning goals and standards, we can assess whether learners have achieved the expected learning outcomes.

Feedback and improvement suggestions: Based on the results of data analysis and learning effectiveness evaluation, we can provide targeted feedback and improvement suggestions to learners. By analyzing learners' behavioral data and learning outcomes, we can identify their strengths and weaknesses, and provide corresponding improvement strategies and learning support to promote their learning outcomes.

5. Evaluation indicators and personalized feedback

In order to accurately evaluate learners' learning outcomes and provide personalized feedback, we need to select appropriate evaluation indicators and develop corresponding feedback mechanisms. On top of this, we can accurately evaluate the learning effectiveness of learners and provide targeted feedback and suggestions. These methods can help learners optimize learning strategies and improve learning outcomes, thereby achieving the goal of evaluating the achievement of learning outcomes based on information technology.

Learning effectiveness evaluation indicators: Learning effectiveness evaluation indicators are the standards and indicators used to measure learners' learning outcomes. Common evaluation indicators include knowledge mastery, learning effectiveness, and learning progress. Learning effectiveness can be evaluated through tests, homework grading, project outcome evaluation, and other methods.

Personalized feedback: Personalized feedback refers to providing targeted feedback and suggestions based on the individual characteristics and learning situation of learners. By analyzing learners' behavioral data and learning effectiveness evaluation results, we can identify their strengths and weaknesses and provide personalized feedback to them.

Real time feedback: Real time feedback is a mechanism that provides timely feedback and suggestions during the learning process. By utilizing sensors and devices in a virtual learning environment, we can monitor learners' behavior and status in real-time and provide immediate feedback based on their performance.

Visual feedback: Visual feedback presents learners' learning outcomes to them through charts, graphs, images, and other forms. Through visual feedback, learners can intuitively understand their learning progress, weak areas, and improvement directions.

6. Case Analysis of Virtual Learning Evaluation System

Labster: Labster is a virtual laboratory platform that provides virtual laboratory experiences in various scientific and engineering fields. This helps educational institutions evaluate the effectiveness of courses, understand students' learning needs, and provide personalized learning support and feedback in a targeted manner. In addition, Labster provides students with a safe, practical, and exploratory environment to enhance their abilities in experimental operations and scientific thinking. The functions of this platform mainly include the following aspects:

1) Experimental operation evaluation: Labster provides a virtual laboratory environment where students can conduct various experimental operations. By documenting students' operations and decisions in virtual laboratories, Labster is able to evaluate students' performance in experimental operations. This assessment can help educational institutions understand students' mastery of experimental techniques and procedures, as well as their abilities in experimental design and data analysis.

2) Knowledge understanding assessment: Labster's experimental scenario combines theoretical knowledge and practical operations, and students need to use relevant knowledge to reason and solve problems during the experimental process. By evaluating students' knowledge understanding and application abilities in experiments, Labster can provide feedback on their understanding of subject concepts.

Simtics: Provides a virtual medical simulation experience aimed at evaluating and cultivating the clinical skills of medical students. It covers multiple medical fields. Through Simtics' virtual simulation evaluation, students can gain a more immersive practical experience and improve clinical skills in a safe environment. The functions of this platform mainly include the following aspects:

1) Clinical skill assessment: Simtics uses virtual simulation technology to simulate real-world clinical scenarios, such as operations and skills in the fields of medicine and nursing. Students can operate in a virtual environment and receive immediate feedback in simulated scenarios. This assessment can help students familiarize themselves with the operational steps, improve their

skill levels, and provide quantitative evaluation results.

2) Autonomous learning assessment: Simtics provides students with opportunities for autonomous learning. Students can explore and practice clinical operations in a virtual environment according to their own progress and interests. The Simtics system tracks students' learning progress and performance, evaluating their level of mastery in the autonomous learning process. This evaluation method can help students manage their learning independently, identify their own weaknesses and improvement directions.

3) Evaluation report and data analysis: The Simtics system can generate evaluation reports and data analysis, providing educational institutions and teachers with evaluation results of students' clinical skills. Educational institutions can use these reports and data to evaluate the effectiveness of courses, understand students' learning progress and needs, and provide personalized learning guidance and support.

7. Conclusion

The evaluation method of learning achievement based on virtual reality technology is of great significance in the field of education. It provides an immersive learning experience, opportunities for practical operation and skill development, as well as quantifiable evaluation and personalized learning support. These characteristics can promote learner engagement, improve learning outcomes, and provide targeted teaching improvement strategies for educators. I hope that the results and conclusions of this study have reference value for researchers and educational practitioners in related fields, and promote the further development and application of learning effectiveness evaluation based on virtualization technology.

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Analysis of Research Progress in Athletic Training in China in the Past 20 years

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Abstract: This paper analyzes the current situation of China's athletic training research in the 20 years since entering the new century from various angles, mainly including the continuous improvement of the item group training theory, the re-examination of the time factor of athletic training, and paying more attention to the combination of competition and education, etc. At the same time, China's athletic training has been analyzed in the development of the new century, which mainly includes the all-round intervention of modern science and technology, the expansion of the theory of athletic training to the theory of competition, the deeper development of the research of athletic training theory, and the humanistic factors will be more important. At the same time, it analyzes the development of athletic training in China in the new century, including the all-round intervention of modern science and technology, the expansion of athletic training theory to competitive sports theory, the deeper development of athletic training theory, and the more emphasis on humanistic factors.

Keywords: Last 20 years; Athletic Training Science; Progress

Introduction

In the past 20 years, with the continuous improvement of the practice level of sports training in China, there is an urgent need for the guidance of sports training theory to broaden the practitioner's understanding, to promote the enlightenment, reflection and awakening of the practitioner's value, and to further make scientific elaboration of the phenomenon of sports training. So that athletes through the usual scientific training, in the game without losing time to show the most excellent sports performance, in order to achieve the ultimate goal of sports training.

1. Current status of research on athletic training in China

1.1 Continuous Improvement of Item Group Training Theory

Item group theory has gradually become a mainstay in guiding other disciplines forward. It has been more than 30 years since the theory of item group training was proposed. As one of the most widely used training theories nowadays, the concept of "item group" has been widely used in many fields such as sports work, sports teaching, sports training, sports fitness, sports industry, sports management, etc. In the past ten years, the item group theory has penetrated into various disciplines, and has become the scaffolding of many disciplines, guiding the advancement and development of the discipline. It has become a scaffold for many disciplines, guiding the advancement and development of the disciplines. Item group theory plays a great role in the formulation of development strategies for competitive sports, the transplantation and development of sports training methods, and the selection of athletes and the flow of athletic talents. While Xiangqun theory plays a strong radiation function to these fields, it is also in the process of continuous self-improvement. This self-improvement process of the Xiangqun theory reflects the scientific spirit that the theory must keep abreast of the times - a truly scientific theory should be able to maintain the relative stability of the basic theoretical structure, but also be able to change according to the times on specific issues, so as to explain more empirical facts in more dimensions and in a wider scope. This is more conducive to the utilization of methodology in command. This is more conducive to the role of methodology in

command.

1.2 Increased focus on the integration of athletics and education

Looking around the world, the Olympic movement is the representative of the highest form of athletic culture. Looking at the process of the emergence, development and decline of the ancient Olympic Games, we can clearly see that one of the important reasons for its demise is the "alienation" of competition. It is manifested in two aspects^[1]: one is the excessive commercialization and professionalization; the other is the cruelty of means and the weakening of education. The "materialization" of modern athletics is becoming more and more obvious, and the phenomena of black whistle, fake ball, doping, etc. in domestic competitions are endless, which will inevitably lead to the athletes not being able to find their way back to the world and lose themselves. Today's society needs sustainable development, and as the main body of society - people also need sustainable development. Athletes as a complete social person, he can not be a competitive machine, work, social, emotional and so on is also necessary for them, athletes also need to harmonize the development. Therefore, the aim of "nurturing people to win the championship" is the purpose of competitive sports, which can not only resist the excessive "alienation" of competitive sports, but also promote the harmonious development of sports, human and society.

1.3 Revisiting the temporal and spatial factors of athletic training

The temporal and spatial concepts of athletic training are from another perspective to recognize training activities, whose spatial characteristics are mainly the content, methods and means of training, and whose temporal characteristics are mainly the process, cycle and arrangement of training. Sports training from time and space together constitute the system of sports training science. However, previous training theories have obviously neglected its time factor, which is manifested in the lack of time factor support of training theories.

At the beginning of the new century, the textbook of Sports Training published by Higher Education Publishing House has subdivided the original chapter of "Structural Organization and Control of Sports Training Process" into three chapters of "Multi-year Training Plan and Implementation for Athletes", "Annual Training Plan and Implementation for Athletes" and "Weekly Training Plan and Implementation for Athletes". Athletes annual training program and implementation" and "athletes weekly training program and implementation" three chapters, as a college sports professional textbook, its content reform fully demonstrates the development trend of the theory of sports training: pay more attention to the time factor of sports training, sports training time, space The reform of its content fully shows a development trend of sports training theory: paying more attention to the time factor of sports training, integrating the time and space factors of sports training in a synergistic way, so that the time and space characteristics of sports training can be balanced.

2. The development trend of athletic training science in China

The cutting-edge theories of Chinese athletic training originated from the realistic needs of elite athletes' practice, arose from the rapid development of Chinese athletics, and is the result of the integration and cooperation of the theories of many disciplines and the practice of modern science and technology to help^[2]. How to make the development of athletic training science more perfect, practical and scientific is the theme of development^[3], the deepening and development of Chinese athletic training science will probably be from the following aspects:

- The all-round and multi-angle penetration of modern high-tech. Science and technology is the first force for development will be more obvious in the field of athletic training in the 21st century;
- Deepening of athletic training theory towards competitive sports. Competitive sport will become the focus of athletic training research;
- (a) The study of single disciplines will be deepened. Exercise physiology, biochemistry, training and other single disciplines that make up the theory of athletic training will be developed more deeply;
- The human element will be emphasized more. The idea of "winning" will be more balanced with the idea of "humanism" in the development of athletic training theory^[4].

3. Conclusion

(1) In the past 20 years, the achievements in the field of sports training in China have been made by experts and scholars in various fields after long-term, scientific and systematic research, with rich Chinese characteristics, forming a stream of "Chinese flow" in the theoretical research of sports training^[5]. These new research results have been utilized in modern sports training in combination with practice to promote the improvement of China's overall sports level, and have achieved excellent results in international competitions.

(2) China's sports training field there are still obvious deficiencies and defects, many individual and even guiding ideology, training ideas are still along the foreign training theory, which to a large extent limits the advancement of China's training practice.

(3) The research and innovation of sports training theories and methods are also only scientific results in the field of theory, how to apply to actual training and competition is the core issue.

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Survey on the Satisfaction of English Major in Applied Universities

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Abstract: The cultivation of English majors in applied universities aims to cultivate versatile foreign language talents that meet the needs of social development. The construction and development of the English major need to keep up with the pace of changes in the times, and meeting the needs of current social development is the main criterion for measuring the value of this major. The satisfaction of English major students with their major is an important factor affecting the construction and reform of the major. This article mainly uses the questionnaire survey method to survey English majors in several applied universities and analyze their major satisfaction.

Keywords: Applied Universities; English Major; Major Satisfaction

1. Introduction

The English major is a relatively mature and well-established major with a long history in China's higher education system. So far, the English major has become a widely established major in various professional and comprehensive universities in China, and has very mature experience. However, application-oriented universities generally focus on engineering majors, so the talent cultivation goals for English major in these universities are significantly different from those of other types of universities. Since 2020, English majors have faced enormous challenges and many new opportunities. In the context of increasingly close globalization connections, China's social development requires new foreign language talents who possess both national sentiments and international perspectives.

In the new context, whether the construction and development of the English major can keep up with the pace of changes in the times, and whether it can meet the needs of current social development are the main criteria for measuring the value of this major. The core of professional construction is curriculum construction, and the construction and reform of professional courses are the key to talent cultivation. The rationality of the curriculum plan for the English major is the main goal of its development and reform. The satisfaction of English major students in applied universities with the talent cultivation goals and curriculum settings of their major is the main influencing factor for the development and reform of their major. This study will explore the satisfaction of English major in applied universities.

2. Research Design

In order to gain a deeper understanding of the satisfaction level of English major students in applied universities, this study develops the "Satisfaction Survey Scale for English Majors in Applied Universities" based on the theory of expectation confirmation. Through online surveys, English major students in several applied universities are surveyed to analyze their satisfaction level with their respective majors.

In 1980, Oliver proposed the Expectation Confirmation Theory (ECT), which is the basic theory for studying consumer satisfaction. This theory suggests that the expectation of confirmation strengthens the corresponding willingness or behavior. At present, this theory is widely applied in the field of education. In recent years, this theory has been increasingly applied to the field of education, such as students' loyalty to their majors, undergraduate professional identity, students' satisfaction with the curriculum, and students' satisfaction with learning platforms. In these studies, the confirmation of students' expectations is used as a measure of satisfaction. If students' expectations are confirmed, satisfaction is higher. Based on this theory, this study develops a survey scale using a seven point scale (with 1-7 options for each item, ranging from dissatisfied to very satisfied) with a total of 28 items, including students' professional expectations, professional perceived performance, degree of expectation confirmation, and professional

satisfaction.

3. Major Satisfaction Survey

3.1 Survey Situation

In order to gain a deeper understanding of the current status of professional satisfaction among English major students, this study conducts two actual measurements. Cronbach α is 0.906. The reliability and quality of the scale are very high. The total correction factor (CITC) coefficients are all greater than 0.4. Because the main purpose of this study is to understand the satisfaction of English major students in applied universities with their major, the main survey subjects selected are third and fourth year students in their major. After two years of study, they have gained their own understanding of their major. A total of 258 questionnaires were collected, among which invalid questionnaires (including single choice questionnaires and incomplete responses) were excluded, resulting in a total of 253 valid questionnaires.

60% of the tested subjects were third year students. The survey results show that the overall satisfaction of English majors in applied universities is 4.31. The satisfaction index is 15%, and the complaint index is 6.04%. It can be seen that the overall professional satisfaction of English majors in applied universities is at a "relatively satisfactory" level. This indicates that there are still some problems in the establishment of English major in such universities. Further analysis reveals that there are two items with a score below 4. The first item is "When applying for the college entrance examination, I had a good understanding of English major", with a score of only 3.38. This fully indicates that most English major students do not have a clear understanding of the major when applying for it. The second question is 'If you have the opportunity to choose a new major, you will also choose an English major.' The score for this question is 3.8. From this, it can be seen that students' expectations for this major have not been fully confirmed, thus their willingness to choose the major again or their subsequent behavior has been affected.

The scores for other questions are all between 4 and 5, with 3 items having the lowest score of 4.13, mainly including: "students' understanding of their interests before applying", and "I am very optimistic about the understanding of the English major training program" and "the employment prospects for the English major". The three options with higher scores are: satisfied with professional practical teaching courses; Satisfied with the theoretical courses offered in this major; Willing to pursue studies or work related to this major after graduation. The survey shows that some students do not have a clear understanding of their major choices, career development, and career planning.

3.2 Reliability and Validity

In order to gain a clearer understanding of English major students' expectations, perceptions, degree of expectation confirmation, and their relationship with overall major satisfaction, this study constructs a major satisfaction model for English major students based on the theory of expectation confirmation. Therefore, according to the theory of expectation confirmation, it is divided into four dimensions: major expectation (4-11), major perception (12-20), expectation confirmation (21-26), and major satisfaction (27-30).

Table 1: Composition reliability and convergence validity table

Dimension	Item	Estimate	S.E.	C.R.	P	Std	SMC	CR	AVE
Major Expectation	Q4	1				0.84	0.706	0.963	0.764
	Q5	1.029	0.066	15.597	***	0.795	0.631		
	Q6	1.028	0.065	15.798	***	0.801	0.642		
	Q7	1.049	0.061	17.286	***	0.846	0.716		
	Q8	1.128	0.055	20.572	***	0.93	0.865		
	Q9	1.12	0.053	20.959	***	0.939	0.882		
	Q10	1.005	0.052	19.154	***	0.896	0.803		
Major Perception	Q11	1.025	0.05	20.676	***	0.933	0.870		
	Q12	1				0.901	0.812	0.982	0.861
	Q13	1.029	0.04	25.735	***	0.936	0.876		
	Q14	1.032	0.039	26.606	***	0.946	0.895		

Expectation Confirmation n	Q15	1.037	0.042	24.848	***	0.925	0.856	0.981	0.897
	Q16	1.076	0.041	26.051	***	0.94	0.883		
	Q17	1.025	0.039	26.594	***	0.946	0.895		
	Q18	1.014	0.04	25.444	***	0.933	0.870		
	Q19	0.974	0.038	25.73	***	0.936	0.876		
	Q20	0.949	0.043	22.188	***	0.887	0.787		
	Q21	1				0.901	0.812		
	Q22	1.115	0.043	26.18	***	0.941	0.886		
	Q23	1.125	0.041	27.155	***	0.952	0.907		
	Q24	1.15	0.039	29.372	***	0.974	0.949		
	Q25	1.131	0.042	27.242	***	0.953	0.909		
	Q26	1.143	0.041	27.957	***	0.961	0.923		
	Q27	1				0.808	0.516		
	Q28	1.102	0.071	15.441	***	0.834	0.907		
Major Satisfaction	Q29	1.146	0.064	17.77	***	0.952	0.696	0.899	0.693
	Q30	1.162	0.092	12.587	***	0.718	0.653		

From Table 1, it can be seen that the Std values of all questions are greater than 0.5, so all questions are retained during satisfaction model analysis. The CR values of all four dimensions are greater than 0.7, indicating good consistency within each Dimension. The AVE values of all four dimensions are greater than 0.36, indicating high convergence validity for each dimension.

Table 2: Discriminant validity

Dimension	CV		DV		
	AVE	ME	MP	EC	MS
ME	0.746	0.864			
MP	0.861	0.924	0.928		
EC	0.897	0.921	0.895	0.947	
MS	0.693	0.798	0.828	0.834	0.832

The diagonal values in Table 2 are greater than the Pearson correlation coefficients between other dimensions. It indicates that there is a significant difference in validity between each dimension, and there is no overlap in the entries between each construct.

4. Data Analysis

4.1 Research hypothesis

The expectation confirmation theory holds that the confirmation of expectation will strengthen a person's certain will or behavior; If expectations are not confirmed, an individual's will or behavior cannot be reinforced. This article uses the expectancy confirmation theory model as the research model to study the relationship between major expectations, major perception, degree of expectation confirmation, and major satisfaction of English major students. Therefore, this article proposes five hypotheses.

Table3: Research Hypothesis

Dimension	Hypothesis	Content
ME	H1	Major expectations can have a positive and significant impact on the level of expectation confirmation.
	H2	Major expectations can have a significant positive impact on major perception.
	H3	Major perception can positively and significantly affect the degree of expected confirmation.
MP		

EC	H4	Major perception can positively and significantly affect major satisfaction.。
	H5	The degree of expectation confirmation can have a positive and significant impact on major satisfaction.

4.2 Research hypothesis validation

The commonly used evaluation criteria for model fit include absolute fit index and relative fit index. IFI, TLI (NNFI), and CFI are the most common fit indicators.

Table 4: Model Fit

Model fit index	Standard	The model fitting index
Normed Chi-sqr (χ^2/DF)	$1 < \chi^2/DF < 3$	2.511
GFI	> 0.8	0.864
AGFI	> 0.8	0.802
RMSEA	< 0.5	0.147
SRMR	< 0.08	0.051
TLI (NNFI)	> 0.9	0.913
CFI	> 0.9	0.887

From the various indicators of fit in Table 4, it can be seen that the model in this study has a good fit (moderate fit).

4.3 Hypothesis analysis

There are total 5 hypotheses. After testing, the results of whether the hypotheses are valid are shown in Table 5.

DV	IV	Unstd.	S.E.	z-value	P	Hypo.	Std.	R ²	Result
ME	MP	0.794	0.056	14.108	***	H2	0.806	0.649	support
MP	EC	0.989	0.058	17.171	***	H3	0.976	0.906	support
ME	EC	-0.031	0.040	-0.766	0.444	H1	-0.031		nonsupport
EC	MS	0.385	0.114	3.382	***	H5	0.367	0.888	support
MP	MS	0.623	0.121	5.165	***	H4	0.586		support

Table 5: Hypothesis results

According to Table 5, the R² values of major perception, expected confirmation, and major satisfaction are 0.649, 0.906, and 0.888. This indicates that the model has good explanatory power. $P > 0.05$ cannot deny the null hypothesis, therefore hypothesis H1 does not hold and H2, H3, H4, and H5 do.

5. Discussion

5.1 Discussion about hypothesis results

According to the hypothesis results, for English majors in applied universities, their major expectations have a negative impact on the degree of expectation confirmation (Std=-0.031). The main reasons are as follows: firstly, the survey shows that a considerable number of students are not familiar with their major and do not have detailed plans for their professional learning and future career choices. Therefore, their understanding of the major is not comprehensive or even one-sided; Or there may be a phenomenon of high or low expectations for the major, which directly affects students' perception of the major and thus affects the confirmation of major expectations. The survey data shows that the average value of the 9 items expressing students' expectations for confirmation is 4.25, indicating that students have high expectations of their majors and are prone to disappointment in actual major perception, and their expectations cannot be confirmed; Low major expectations can easily affect students' enthusiasm and interest in the field, thereby affecting the confirmation of major expectations.

Major expectations can have a significant positive impact on major perception. The higher the students' expectations for their major, the more serious and focused they will be on delving deeper into the professional courses, and spending more energy on learning professional knowledge and skills. Because the higher the expectations for their major, the more inclined they are to strive to achieve professional achievements, resulting in higher professional perceived performance; Major perception can positively affect the level of expected confirmation. The professional achievements that students ultimately achieve are the best reflection and interpretation of professional talent cultivation plans, while professional courses are the ultimate foothold and embodiment. The survey results indicate that major perception has a very high impact on the level of expectation confirmation, which further demonstrates the importance of professional curriculum design. Major perception can positively and significantly affect the degree of confirmation of major expectations, but it cannot directly and significantly affect major satisfaction. The degree of expected confirmation can have a positive and significant impact on major satisfaction. The higher the degree to which students' expectations of their major are confirmed, the higher their satisfaction with the major.

5.2 Strategies for Improving Satisfaction of English Major in Applied Universities

Firstly, students should be guided to establish reasonable major expectations. At the beginning of enrollment, More efforts should be increased to enable students to fully understand the talent training goals, training plans, curriculum settings, and future employment prospects of English majors in applied universities, so that students have a reasonable understanding and expectations of the major, and thus can set professional learning plans; Secondly, students' major perception should be enhanced. In daily education, teaching, and management work, students should be guided to develop and reasonably utilize the learning resources provided. Education and teaching work should follow the psychological development laws of students, and teachers should pay attention to their mental health, and comprehensively enhances students' major perception; Thirdly, the degree of recognition of students' major expectations should be enhanced. The degree of expectation confirmation is mainly influenced by major perception. Therefore, schools should provide abundant hardware and software resources to promote students' learning and ability development. While implementing talent development plans, they should promptly understand and meet students' reasonable needs.

With the changes of the times, the goals and plans for talent cultivation in English majors are constantly being reformed, and theoretical and practical courses are also being reformed. Applied universities are constantly exploring to cultivate comprehensive foreign language talents.

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A Brief Analysis of the Relationship Between the School Culture and the Effective Educational Leadership of the Principal

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Abstract: This journal article aims to analyze the relationship between school culture and effective headteacher educational leadership, and how this relationship affects school performance and student learning outcomes. We will explore this important issue in depth and provide institutions and principals with practical advice on how to understand and use school culture to enhance the educational leadership of principals.

Keywords: School Culture; Principal Leadership; Educational Development; Leadership Effectiveness

1. Introduction

School culture and principal educational leadership have long been key concepts in the field of education, which have a profound impact on school performance and student learning outcomes. School culture refers to a system of shared values, beliefs and codes of conduct formed within the school, which reflects the core values and goals of the school and can shape the atmosphere, character and image of the school. The principal's educational leadership is the principal's leadership ability in educational institutions, including leadership style, decision-making ability, teamwork and educational vision.

2. The relationship between school culture and principals' educational leadership

2.1 Characteristics of principals' educational leadership

Principal Educational leadership is a key concept that is critical to the success of educational institutions and the growth of students. This concept of leadership includes a number of important characteristics, which together constitute the core qualities of a good principal.

1. Leadership Style: A principal's leadership style is representative of his or her leadership behavior and approach. One of the characteristics of the principal's educational leadership is flexibility, the ability to adapt to different situations and needs. Good principals typically employ a democratic, participatory, and heuristic leadership style that encourages faculty and staff to actively participate in educational decisions and build collaborative relationships to promote the school's common goals.

2. Decision-making ability: Principals need to demonstrate a high degree of decision-making ability in daily management and educational decision-making. They must be able to collect and analyze data, intelligently set educational policies and goals, and take effective action. A good principal will consider the best interests of the student in the decision-making process, ensuring that the educational institution is moving in the direction of improving learning outcomes.

3. Teamwork: Principal educational leadership emphasizes the ability to work with staff, parents, and the community. Principals need to establish a positive atmosphere of teamwork that encourages open communication and trusting relationships. Working closely with all parties helps to create a more productive learning environment and better meet the needs of students.

4. Educational Vision: Good principals usually have a strong educational vision, and they are able to set clear goals and directions for the future development of the school. This vision is not limited to academic achievement, but also includes aspects such as the overall development of students, educational innovation and community engagement. The principal's vision inspires staff and students

and leads the school towards higher standards and achievement.

5. Educational Leadership: Principal Educational leadership also includes a deep understanding and commitment to the educational process and the quality of teaching. They need to focus on educational innovation and improvement, ensuring that schools adopt the best educational practices to promote student learning and development. This includes support for teacher professional development, curriculum reform, and the integration of educational technology.

6. Emotional Intelligence: Principal educational leadership also includes emotional intelligence, which is sensitivity to the feelings and needs of members of the school community. Principals need to build supportive and caring relationships that understand and respond to the feelings and concerns of students, staff and parents. Emotional intelligence helps create a warm, supportive and inclusive school culture.

7. Self-reflection and learning: Good principals are often advocates for continuous learning and improvement. They continuously improve their leadership skills through self-reflection and professional development to adapt to the changing educational environment. This attitude of self-improvement helps to drive the development of the school and improve the quality of education.

2.2 The relationship between school culture and principals' educational leadership

The interaction between school culture and principals' educational leadership is one of the complex and important relationships within educational institutions. School culture can not only shape the principal's leadership style, but also be influenced by the principal's educational leadership.

School culture has a profound influence on the principal's leadership style and behavior. School culture is the collection of core values and beliefs of the school community, which reflects the common philosophy within the school. For example, a school culture that emphasizes innovation, collaboration, and equity in education may motivate principals to adopt an open and democratic leadership style. In this context, the principal will encourage teachers and students to participate in the decision-making process and jointly develop educational policies and goals to achieve the core values emphasized by the school culture.

If the school culture is more traditional, conservative, and centralized, the principal may be more inclined to adopt a more centralized leadership style to ensure stability and discipline in the school. In this case, the principal may be more involved in the decision-making process and maintain more control over the day-to-day running of the school. Therefore, the school culture has a guiding influence on the principal's leadership style.

The principal's educational leadership also has the ability to shape the school culture. A principal with a strong educational vision can push the school culture in a more positive, innovative and developmental direction. Their leadership style and educational decisions can communicate the school's mission and core values, thereby influencing the behavior and attitudes of the school community. For example, if principals emphasize the holistic development of students and educational innovation, the school culture may gradually evolve into a more open, pro-innovation culture that encourages teachers to explore new educational methods.

3. Results and discussion

3.1 The influence of school culture on principals' educational leadership

The influence of school culture on principals' educational leadership is an important issue in the field of education. School culture, as a system of shared values, beliefs and codes of conduct formed within the school, has a profound influence and can significantly shape and influence the principal's leadership behavior and style.

School culture has a direct influence on the principal's leadership style. The core values and beliefs emphasized by different school cultures influence how principals interact with staff and develop educational policies and goals. For example, a school culture that emphasizes innovation, collaboration, and equity in education may encourage principals to adopt a democratic and participatory leadership style. Under this culture, principals may be more inclined to work with teachers to develop educational policies, listen to their input, and build partnerships to achieve the core values promoted by the school culture. This democratic leadership style contributes to the active participation and input of the faculty and staff, thereby advancing the school towards higher educational goals. A traditional, conservative, and centralized school culture may lead principals to adopt a more centralized leadership style. In such

cases, the principal may be more involved in the decision-making process and maintain more control over the day-to-day running of the school to ensure stability and discipline. This centralized leadership style may fit with the characteristics of the school culture, but it may also limit faculty autonomy and innovation.

School culture can also influence principals' decision-making abilities and priorities. The educational goals and expectations emphasized by the school culture guide the principal's decision making to ensure that these goals are achieved. If the school culture emphasizes academic achievement and competitive education, principals may pay more attention to the quality of education and students' academic performance. Conversely, if the school culture is more focused on the overall development and social responsibility of students, principals may focus more on character education and community engagement. Therefore, school culture influences not only principals' leadership style, but also their decisions and actions.

School culture can influence the way principals interact with staff, parents, and the community. If the school culture emphasizes respect, cooperation, and close teacher-student relationships, principals may be more inclined to build close bonds and understand and respond to the needs of staff and parents. This interaction helps to strengthen the cohesion and support of the school community.

3.2 Shaping of school culture by the principal's educational leadership

The principal's educational leadership plays a crucial role in shaping the school culture. A principal with vision and drive can profoundly influence the school culture, stimulate the innovative spirit of teachers and students, and push the school toward higher educational goals.

The principal's educational vision is an important factor in shaping the school culture. The principal's clear vision not only sets a clear direction for the school, but also inspires the entire school community to actively pursue a common educational goal. For example, a principal may have a strong vision that the school should be a center of innovation and exploration, encouraging teachers and students to experiment with new approaches in educational practice. Such a vision will spread in the school culture, prompting staff to explore innovative teaching strategies and foster creativity in students.

The principal's leadership behavior and decision-making mode have a profound influence on the formation of school culture. The principal's actions serve as a model for the school community, and the principal's decisions reflect the values and mission of the school. If the principal demonstrates leadership that is open, inclusive and encourages experimentation, this culture will also flourish within the school. For example, principals can support teachers' participation in professional development opportunities and encourage them to explore new educational tools and approaches that will foster a positive learning atmosphere in the school culture.

The principal's leadership behavior can also convey the values and mission of the school. Their decision-making style and actions become reference points for the school community. If principals emphasize holistic student development, character education, and community involvement, this focus will permeate the school culture. Greater emphasis will be placed on character education programs, community service activities, and student leadership development to foster a positive school culture.

4. Conclusions and Suggestions

By examining in depth the relationship between school culture and principals' educational leadership, this journal article highlights the close interaction between them and their important impact on school performance and student learning outcomes. Based on the findings, we make the following recommendations: School leadership should actively promote and foster a positive school culture that emphasizes the core values of innovation, collaboration, and equity in education. Principals should play their leadership role in shaping school culture and promoting positive educational reform and innovation. Educational institutions should provide training and development opportunities to help principals improve their educational leadership. Further research and follow-up studies will contribute to a more complete understanding of the relationship between school culture and principals' educational leadership and how they affect school performance and student learning outcomes.

By understanding and utilizing the school culture, educational institutions and principals can work together to promote the development of the school, improve the quality of education and provide better educational opportunities for the future of students. This study provides important insights and practical recommendations for practitioners and policymakers in the field of education on the relationship between school culture and principals' educational leadership.

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Study on the Implementation of the Family Education Promotion Law in Ethnic Minority Areas under the Background of National "Double Reduction"

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Abstract: As one of the ways of the double reduction policy, the Family Education Promotion Law not only urges state organs and schools to fulfill their obligations, but also contributes to the growth of children, the shaping of family traditions and the vigorous development of society. However families who still believe that the traditional concept of beating still exists and mostly in rural areas, families with advanced concepts believe that children should not take beating and scolding, but conform to their own characteristics and using a scientific way of education and training.

Keywords: Double Reduction; Minority; Family Education; Family Education Promotion Law; Implementation

Introduction

In the past, the state and society did not intervene family education too much, which led to the low educated population and cultural level in China. Also the phenomenon of campus violence and underage delinquency is increasing. The education of minors should be in the family first, focus on the school, the key lies in how to coordinate between the family, school and society. Only through national legislation can this systematic system construction be carried out. How to optimize and improve the methods of family education becomes an important problem in the process of policy implementation.

This topic tries to study and discuss the implementation of family Education Promotion Law in ethnic minority areas under the background of double reduction policy in China in recent years.

1. Family education under the implementation of the Family Education Promotion Law

Through the questionnaire survey and interview survey of the law and family education by 50 families in the minority areas of Hunan Province, The survey found that 74% of families choose to "reasonable children", 46% of families choose "casual parenting", Only 34% of the families chose to "take care of their children according to the law"; The guardians of 50% of the families had knowledge and concern about the promotion law, And pay attention to family education; The guardians of 50% of the families do not know, Not even knowing that the state had enacted the regulation, Such families are educated more casually, Most do not pay much attention to the child's physical and mental condition, Through interviews, we learned that such families have more children and a heavy burden, Guardian is busy ignoring the idea of the child, Reasonable education cannot be given. At the same time, 92% of families choose "mastering scientific family education methods" as a reasonable view of family education, indicating that although parents know what is a reasonable way of family education, they are difficult to obey when taking children.

Therefore, "parents or guardians' good cultivation and guidance of minors" is the essential definition of family education by the promotion law. The different attitudes of families towards this family education law reflect different ways of family education.

2. Implementation of the social and school-family education Promotion Law

2.1 Active promotion of the Family Education Promotion Law by social institutions

By investigating multiple ethnic minority areas in 2022-2023, the local bureau of education since the implementation of attention, not only in the primary school to carry out the family education promotion act to preach, also for different kindergarten to carry out all kinds of small classroom, parent-child activities, moral education activities and class meeting many times. These moves were also confirmed in the survey: 72% of families received guidance from the school for family education, and 60% also received help from local neighborhood committees or women's federations. Now kindergartens, primary and secondary schools have also integrated the family education guidance service system into school planning, and relevant content has been added to teacher ability training.

2.2 The development of family education guidance services

Ethnic minority families still need to receive active supervision from local neighborhood committees or women's federations. The basic needs of these families are neglected, and the family education guidance services need to be improved.

2.2.1 The guarantee mechanism needs to be more improved

The country has issued multiple policies related to family education guidance services, which have specific and clear provisions on their content, funding, and resources, such as "will make laws about family education", but many policies are not really put in place, still stay in the advocacy level.

2.2.2 Unbalanced supply of services among different family objects

At present, family education guidance service has a certain gap in different regions of China, which is incomplete and unbalanced. Both parents and developing teenagers need different help. At the same time, the service sites in rural areas, especially ethnic minority areas and poor areas are still neglected. For many special families and children, there are still many deficiencies in targeted, scientific and effective family education guidance.

2.2.3 Lack of normative service methods and content

The guidance activities lack of unified guidance of scientific norms and specific provision for family education guidance service, on the service mode and its quality is difficult to control, the main problem is to give priority to with traditional form, service theory and ignore practice, innovation mode is not well combined with modern intelligent, unable to do fine precision and mostly become a mere formality, lead to implementation effect is not ideal, family education is difficult to realize the normative guidance service.

3. The importance of promoting and implementing the Family Education Promotion Law

3.1 Family education has a lifelong impact on children

3.1.1 The impact of family environment on children's growth

If the family does not consider from the child's point of view, the child's endurance and physical and mental development characteristics, and force the expected social role to the child, it will inevitably affect the child's life. Healthy family atmosphere and environment for children growing up, their talents and potential will be discovered earlier to develop, and they will show some aspects of special talent earlier. Therefore, the role of the family environment is beyond doubt, the key is how to treat it.

3.1.2 Parents' role models to their children

Teaching children to be a man is the first condition for growth. Parents' words and deeds in life express their attitude towards life. A child's moral values and values are acquired through acquired learning. Whether a child can adapt to the environment when he grows up depends on his parents' conventional values and social behaviors. The typical characteristics of children are imitation, and parents are the first teachers of children. Children are used to identifying their parents unconditionally, so the brain will determine the object of imitation subtly.

3.1.3 The future of children depends on whether family education is valued or not

In order to provide an excellent learning environment, many families are busy with work to ignore their children, thus ignoring the educational significance of the family for their children. Many families are too materialized, simply thinking that the contribution and investment in education is to let children have the best learning resources in the best school. The original intention of education is to understand children's psychology, follow the law of children's psychological development, family attention to education is not only some simple material input, the creation of material environment, more including the children's psychological care, spiritual environment.

Therefore, the family education promotion method both clear the concept of family education, content and method, for parents in the process of implementing family education, provide the right behavior guide, and the local government, court, public security and other relevant departments of family education guidance responsibilities, provide social support for family education, all-round commitment to promote family happiness and social harmony.

3.2 Make family education better cooperate with school education

School is the second environment for children. No matter the early education institution, kindergarten, primary school or higher education, children spend 90% of their time and energy in school after entering the school. How to make family education better cooperate with school education and change the education, the family education promotion Law has made a detailed response. Both the government and country have put forward higher requirements for family education. In short, parents should not only establish a rational view of success, but also put children's physical and mental health and sound personality in the first place of family education.

4. Suggestions

According to statistics, with family education getting more attention and attention, parents' demand for correct and scientific parenting is also increasing.

4.1 Family aspect

4.1.1 Publicity and education, and the promotion of scientific education level

The local government should strengthen the publicity of the family education promotion law, enhance the awareness of family education and guide parents to pay attention to family education as a basic work.

4.1.2 Establish a family education supervision mechanism

Government departments should establish a perfect supervision mechanism for family education, regularly conduct regular investigation and evaluation of family education, timely find and correct the phenomenon of bad family education, and ensure the safety of children.

4.1.3 Strengthen the importance of family education

The government and educational institutions should popularize the knowledge and skills of family education, and improve the awareness and scientific level of family education. In addition, the establishment of family education parent-child communication platform and family education parent school, to facilitate parents and children for more effective communication and communication.

4.2 Social aspects

4.2.1 Strengthen teacher training

Provide systematic training and research opportunities, actively increase the content of the promotion law, and improve the level of teachers. The education mode should develop and progress, and parents and teachers should discuss the methods of educating children, improve the quality of home-school collaborative education, and lead family education to return to the essence.

4.2.2 Set up community family education guidance and service stations

The residents committee and the villagers committee members checked the whole process, to guide parents to consciously fulfill the responsibility of the first person responsible for family education.

Social media should make effective use of their own advantages to spread scientific family education concepts and promote the

family education promotion law.

5. Conclusion

In short, the country pays more and more attention to family education. Through this investigation and research, we let the family education promotion law into many originally do not know, not familiar with the family, but also see all levels of attention to this laws and regulations and policies. However, the law needs to get more support from all class levels. Therefore, the key to do a good job in family education lies in the tacit cooperation between school, society and family. We should pay attention to the ways and methods of family education, give family necessary help and popularize the Family Education Promotion Law, so that it can enter more families.

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The Enlightenment of TPSR Responsibility Mode of "Moral Education" to Physical Education Teaching

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Abstract: This paper explores the influence of the concept of "moral education" on physical education, and focuses on the application of Teaching Personal and Social Responsibility (TPSR) responsibility teaching model in physical education. Physical education teaching is not only the teaching of skills, but also the indoctrination of values. Through the thought of "cultivating people by virtue", we can make physical education based on moral education and return to the essence of education. The TPSR model makes this idea concrete, emphasizes the personal process and social responsibility, and includes the cultivation of students' sense of responsibility, team spirit and self-management ability in physical education teaching. Through theoretical discussion and empirical analysis, this study revealed the practical application and effect of TPSR model in physical education teaching, proved the importance of this teaching model, and put forward the construction idea of TPSR physical education teaching model. Future research can expand more application scenarios of the TPSR model to achieve better quality and more comprehensive physical education.

Keywords: TPSR Responsibility Mode; Moral Education; Physical Education

Introduction

The essence of sports covers the spiritual elements more important than victory — Responsibility, respect, cooperation and perseverance. For educators, it is one of the basic tasks to cultivate students' these core qualities and skills with the help of physical education courses. In this regard, the traditional Chinese education concept of "cultivating people by virtue" gives profound enlightenment, emphasizing that education should cultivate students' moral character, so as to improve their moral quality. This study aims to cite the TPSR (Teaching Personal and Social Responsibility) teaching model to discuss how the idea of "moral education" is specifically applied to physical education, so as to realize the deep integration of teaching, education and moral education.

The TPSR model is a student-centered teaching strategy model for individual and social responsibility. Its application is not limited to physical education courses, but in physical education teaching, the TPSR model is particularly appropriate, because the environment of physical education teaching is easily combined with its core concept — to guide behavior with practice and drive emotion by experience —. By combining the idea of "moral education" and the TPSR model, we are likely to create a new and profound influence for physical education teaching.

With the continuous evolution of educational concepts, researchers have realized that cultivating skills is not the whole of physical education, but more importantly, it is necessary to cultivate students' sense of social responsibility, self-management ability, team spirit, and positive attitude towards life through physical activities. This paper will review and analyze the relevant published research literature and use scientific research methods to explore the specific application of these ideas in physical education curriculum and their impact on students' physical and mental development. It is hoped that these research results can provide a strong theoretical basis for the future reform of physical education teaching, and promote the physical education teaching toward a deeper and broader educational goals.

Literature Review

The concept of "moral education" largely coincides with the idea of the TPSR teaching model. Both ideas focus on cultivating students' moral responsibility and social responsibility abilities through education. In physical education teaching, these ideas can be put into practice in a substantive way.

In the study of the thought of "cultivating people by virtue", such example Wei Shusheng and Wang Yunli (2006) emphasized that moral education is the leading factor of the all-round development of people, which can promote the cultivation of character and the cultivation of personality. Its research further proves that physical education has an important position and role in moral education.

In view of the TPSR model, Hellison (2011) details the TPSR model and explains its possible applications in various courses, especially physical education courses. He points out that the goal of the model is to help students build a sense of responsibility for themselves and others, strengthen their self-management skills, and gradually develop a positive attitude towards life through teaching activities.

Hellison and Martinek (2006) further studied the application of the TPSR model in school physical education curriculum, with special emphasis on developing students' social skills and enhancing their moral awareness and social responsibility through physical education. Their research found that this teaching model helped improve students' self-motivation and their love of teamwork.

Overall, past research has been enough to illustrate the concept of "moral education" and the importance of the TPSR model in physical education. However, what is needed is more empirical research to show how these ideas are reflected in specific teaching practices and produce positive results. This is exactly what this article will discuss next.

Research Technique

This study used the literature method, interview method, questionnaire method, so as to understand the "khalid ents" thought and the application of TPSR model in sports teaching practice, and in cultivating students' sense of responsibility, team spirit, self-management ability, stimulate the positive attitude and the development of life skills.

The study subject was a public university in Hubei Province, China, and the study lasted for one academic year. The selected schools have implemented the TPSR model in physical education, and the implementation of this model is based on the educational concept of "moral education". Students participating in the study were from the first, grade and second grade, both male and female. The number of random samples was determined as 385 by the RAOSOFT software.

The interviews were conducted with students and teachers, aiming to understand their observations and experiences of the application of the TPSR model in practical teaching. Furthermore, observations were made in PE classes to allow a direct understanding of how teachers use the TPSR model for teaching and students' behavior and responses in PE. As for document analysis, it is the analysis of the school's teaching plan, syllabus, and classroom teaching video video and other related materials.

Results

Values shared between "moral education" thought and TPSR responsibility mode: The research in this part of the paper is based on 44 relevant theoretical documents as analysis samples. Through in-depth reading and comprehensive analysis, it shows that TPSR responsibility mode and the educational thought of "moral education" are highly compatible in the value orientation and implementation level. Specifically, in the physical education teaching activities, both highly emphasize the improvement of students' moral quality, enhance the sense of social responsibility, and cultivate fair competition and teamwork spirit. The score of moral education evaluation items in the evaluation index system in the TPSR teaching mode is significantly higher than that in the traditional teaching mode, which reflects the significant difference.

Application of TPSR responsibility mode in PE teaching practice: To this end, we used the interview method and conducted in-depth interviews with 50 PE teachers who implemented TPSR teaching mode. The results showed that about 90% of the respondents agreed with the positive role of TPSR model in improving students' ideological cognition and practical application of "moral education".

Acceptance and feedback of TPSR responsibility model by college students: According to the questionnaire data of 385 college students randomly sampled by RAOSOFT software, 75% of participants believed that TPSR model can give them strong moral cognitive ability and social responsibility. The average score of the self-evaluation of their moral behavior was significantly higher

than that of the control group. Despite this, 15% of the respondents mentioned that the TPSR model required high difficulties in their self-planning and self-evaluation ability.

Construction of the TPSR PE Teaching Mode

Combined with the results of this study, the construction of TPSR PE teaching mode should mainly include the following four levels:

1. Respect and understanding: Physical education starts from cultivating students' respect and understanding, let them understand that everyone is equal and valuable, respect others and themselves. At this level, teachers focus on defining and conveying the importance of understanding and respect to promote student moral development.

2. Participation and engagement: The TPSR model promotes students' active participation in sports activities, and encourages them to provide constructive feedback to experience and enjoy the process of teamwork. This requires teachers to constantly guide students to actively participate in, and communicate with them effectively.

3. Self-responsibility: This level focuses on students' cognition and responsibility for their personal behavior. The TPSR model pushes students to understand how their behavior affect themselves and others and to recognize their roles and responsibilities in physical activity. Teachers need to guide students to make decisions and solve problems by providing challenging tasks and problems.

4. Responsibility for helping others and the community: The highest goal is to develop students' leadership and ability to serve others. Through the concept of community contribution and the learning and practice of leadership skills, students can see their influence and value on the community, so as to further enhance their social responsibility.

There is a close connection between the above four levels, and can be connected in the actual physical education teaching process, through a series of teaching activities coherent up. In the specific implementation, it is necessary to adjust the teaching strategy flexibly according to the students' individual differences and needs. The role of teachers is to provide guidance, demonstration and encouragement, and help students actively participate in teaching activities, so as to achieve their personal growth and sense of social responsibility.

Conclusion

This study shows that the TPSR responsibility model based on the idea of "moral education" has a positive effect on physical education, and it can enable students to improve their moral quality and sense of responsibility in sports activities, and cultivate active social citizens. The following conclusions were also drawn:

1. TPSR responsibility mode can effectively combine the educational thought of "cultivating people by virtue", and combine students' moral character with physical training through physical education and physical teaching activities, so that students can have excellent moral quality while improving their sports skills.

2. As a teacher, we should make full use of the advantages of TPSR responsibility mode, combine with the actual teaching, fine-tune according to the specific situation of students, and improve the teaching effect.

3. Appropriate guidance and guidance are needed for students to help them better master the ability of self-planning and self-evaluation required by the TPSR model.

4. Encourage the diversification of educational strategies and adopt different methods according to the different needs of students to achieve the best teaching results.

- 5 Further research is needed to understand and explore the impact of this model on different student groups, and to provide more data support for specific teaching.

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How Ideological and Political Education Leads the Common Prosperity of Spiritual Life

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Abstract: Common prosperity of spiritual life is a value pursuit of human beings for a better life and a better society. Promoting common prosperity in people's spiritual life has become the internal driving force for the innovation and development of ideological and political education in the new era. In terms of value implication, ideological and political education to lead the common prosperity of spiritual life mainly provides ideological guidance, establishes value coordinates and cultivates mental tone. Its core meaning is to enrich the connotation of common prosperity of spiritual life with scientific theory, standardize the pursuit of common prosperity of spiritual life with value concepts, and clarify the realm of common prosperity of spiritual life with aesthetic consciousness. Its realization path is mainly theoretical education, cultural edification and practice.

Keywords: Common Prosperity; Ideological and Political Education; Value-Leading

1. Introduction

Common prosperity is an essential requirement of socialism and an important content of the Thought on Socialism with Chinese Characteristics for a New Era. The report to the 19th CPC National Congress pointed out that "we must strengthen and improve ideological and political work and deepen mass activities to build spiritual civilization", "to meet the people's new expectations for a better life, we must provide rich spiritual food". Promoting common prosperity in people's spiritual life has become the internal driving force for the innovation and development of ideological and political education in the new era. "Common prosperity of spiritual life" is not only a value pursuit of human beings for a better life and a better society, but also highly embodies the essential requirements of socialism with Chinese characteristics and the important features of Chinese modernization. A deep understanding of the value guidance of ideological and political education for common prosperity in spiritual life is the fundamental need for promoting common prosperity based on the new era and realizing a better life for the people.

2. The value implication of ideological and political education leading the common prosperity of spiritual life

Common prosperity of spiritual life means that the spiritual life of all the people is generally in a rich and full state, which is an ideal state presented in the process of realizing common prosperity. Promoting common prosperity in spiritual life is a historical process of joint efforts, joint governance and shared benefits by all people. This process deeply demonstrates the common aspiration of all people for a better spiritual life.

2.1 Ideological and political education provides ideological guidance for common prosperity of spiritual life

The realization level of common prosperity in spiritual life is directly related to people's sense of gain, justice and happiness, and thus affects the quality of promoting common prosperity in society as a whole. Spiritual life refers to a certain activity and a certain state that people conduct in the non-material level such as thought belief, emotional experience, mental cultivation and aesthetic intention. From the perspective of the content level of spiritual life, the common prosperity of spiritual life is the all-round and

multi-level enrichment of people's thought, emotion, psychology, aesthetic and other elements. As for the basic elements of common prosperity of spiritual life, the basic elements in the first place are ideological content. Once there is lack of ideological elements, common prosperity of spiritual life cannot be realized. The common prosperity of people's spiritual life is based on the great power of the people's Juche thought to enrich and become more beautiful. If we want to build a solid bridge between ideological and political education and common prosperity of people's spiritual life, the key task is to adhere to the people-centered approach and better meet the people's needs for ideological growth in the new era.

2.2 Ideological and political education establishes value coordinates for common prosperity of spiritual life

In essence, spiritual life is a value choice. The difference between the goal of spiritual life and the level of need fundamentally depends on the difference of value choice. The promotion and realization of common prosperity in spiritual life is actually to dynamically deal with the contradictory relations between the subject and object of values in different social times). From the materialist view of history, the continuous satisfaction of the material needs of the people will inevitably lead to richer practical needs in the spiritual life. The trend of pan-entertainment and materialization in the construction of modern people's spiritual life profoundly reflects a kind of negative spiritual pleasure formed by indulgent, blind and even extreme commodity consumption behaviors of some social groups. The existing chaos in the field of people's spiritual life reflects the turning of values in the process of social transformation, which will be affected by the change of social background. Under the tide of world multi-culture, the conflict and blend of traditional and modern, Western and Chinese, mainstream and non-mainstream cultural values affect and change our people's cognition, perception, experience and expectation of the existing world of spiritual life.

2.3 Ideological and political education for the spiritual life of common prosperity to cultivate the mental tone

In order to achieve common prosperity of spiritual life, we should strengthen the emotional support by cultivating a good social mentality while giving full play to the setting and directional effect of advanced theory and core values. Social mentality is a kind of mental attitude, emotional intention, emotional feeling and other mental states shared by most social members under the influence of specific social and cultural environment. It is the product of mutual penetration and integration of social consciousness and social psychology. Good social mentality is the important cornerstone of shaping healthy social trend of thought and public opinion, and also the core content of the construction of social spiritual civilization. The social mentality of the broad masses of the people has a direct effect on the development level and growth height of people's spiritual life. "Cultivating self-esteem, self-confidence, rational peace, positive social mentality" is the proper meaning of the topic of promoting common prosperity of spiritual life. Social values affect and determine people's social emotions, cognition and emotion, which is the core content of social mentality, but also the most implicit and stable basic elements. It is precisely because people's value identification and ideology affect the formation and evolution of social mentality that ideological and political education always has an irreplaceable important position in the process of promoting the healthy development of social mentality.

3. Ideological and political education to lead the spiritual life of the core essentials of common prosperity

The common prosperity of spiritual life is the representation of The Times of the unity of opposites between spirit and material of dialectical materialism, the theoretical innovation of the interdependence and mutual promotion of Marxist spiritual life and material life, and the inheritance and development of the theory of building socialist spiritual civilization. A deep grasp of the core essentials of giving full play to the leading role of ideological and political education in promoting common prosperity of spiritual life will help to transform common prosperity of spiritual life from a beautiful vision into a realistic picture.

3.1 Enriching spiritual life with scientific theories, meaning common prosperity

Firstly, the dialectical relationship between material affluence and spiritual affluence is understood from the theory of dialectical materialism. Material prosperity and spiritual prosperity are dialectically unified. On the one hand, we must persist in developing

social productive forces to create rich material wealth and consolidate the material foundation for common prosperity of our spiritual life. On the other hand, spiritual life may have positive or negative reactions on material life, so we must create conditions to guide them to play a positive role in promoting material life. We should grasp the principle that labor is the essence of wealth production and correctly understand the practical role of labor in promoting common prosperity of spiritual life. The common prosperity of spiritual life is not an abstract historical category. The common prosperity of people's spiritual life cannot only rely on people's subjective experience and feeling, but should be created by hard work. Finally, in Marx's theory of cultural construction, we seek the cultural power of common prosperity of spiritual life. Culture is a profound inner power in people's spiritual life, which can be transformed into an external material power when people understand and transform the natural world. It has a strong influence on the transformation from free nature to artificial nature, and in turn promotes the richness of people's spiritual life.

3.2 Standardizing spiritual life with values and pursuing common prosperity

Ideological and political education in the new era takes cultivating and carrying forward socialist core values as its main task, which defines the direction and principles for ideological and political education to lead the common prosperity of spiritual life. On the one hand, the socialist core values reflect the direction of people's pursuit of common prosperity in spiritual life. Socialist core values are the concentrated embodiment of the mainstream values of society, so the vast majority of individuals in society can not live without the spiritual prosperity of socialist core values. On the other hand, the socialist core values reflect the characteristics of The Times that people pursue common prosperity in spiritual life. People's spiritual life is produced in the historical process of real people engaged in material production activities and real life activities. Life reflects their material life conditions in a specific historical period. People's spiritual life needs originate from the needs of material life. The spiritual life needs of people in any period of society are the reflection of the needs of material production and life in a particular social period. They must reflect the characteristics of a certain social historical period and must conform to the value pursuit of certain social development needs.

3.3 Clear the realm of common prosperity of spiritual life with aesthetic consciousness

Beauty is an important source of spiritual enrichment, aesthetic activities let people live a warm soul, rich in imagination of spiritual life. As an important carrier of ideological and political education, cultivating aesthetic consciousness is an important field for ideological and political education to lead the common prosperity of spiritual life. In real life, the increasing improvement of material conditions does not necessarily lead to the improvement of the realm of spiritual life. In some cases, the wealth of material life may lead to the impoverishment and even alienation of spiritual life. Only when people's material life is rich can their aesthetic needs appear. Only when people's aesthetic needs are satisfied to a certain extent can their spiritual life be rich to a certain extent. People with material life need beauty infiltration to cultivate their spirit and get rid of the situation of cynicism or hedonism. At the same time, Marx pointed out that man, as a unity of material scale and spiritual scale, has the most ideal reality basis only if he can satisfy both natural and spiritual needs. Considering the spiritual life in the virtual world, people's aesthetic consciousness in the real spiritual life is occupied by the visual culture in the virtual world, the alienation of material scale leads to the loss of spiritual scale, resulting in the reversal of the boundary between the real world and the virtual world. Spiritual life cannot find a "poetic dwelling" in the virtual world, but may fall into nihilism due to the emptiness of the soul.

4. Ideological and political education guides the realization of common prosperity in spiritual life

To achieve common prosperity of the people's spiritual life in the new era, we should guide practice with scientific thought and theory, cultivate sentiment with positive and advanced culture, and give full play to the important driving force of ideological and political education in achieving common prosperity of the people's spiritual life. Ideological and political education not only contributes to the enrichment of individual spiritual life, the cohesion of social spiritual forces, and the construction of a harmonious and symbiotic cultural environment, but also is a key link to realize the value of common prosperity of spiritual life in a wide range of social groups.

4.1 Theoretical education: the logical premise to lead the realization of common prosperity in spiritual life

In the aspect of ideology and theory, scholars at home and abroad have formed different theoretical understandings and ideas on how to achieve common prosperity in spiritual life. In the aspect of social spiritual production, a series of exploration, creation and practice activities carried out by people in order to meet the needs of individual spiritual culture are the basis for realizing the development of individual spiritual life, and have an important impact on the development form of individual spiritual life. Although there are different theories about the needs of spiritual life and different forms of spiritual production to meet the needs of people's spiritual life, in the final analysis, they all need to focus on how to understand the connotation of the needs of spiritual life, grasp the essence of the needs of spiritual life and implement the practice of spiritual production. Further strengthen ideological and political education in the realization of the people's spiritual life of common prosperity of the theoretical understanding and practical guidance. The realization of common prosperity of spiritual life will inevitably affect the change of the type, level and structure of people's spiritual needs. With the significant improvement of people's material living standard, they have higher pursuit and yearning for individual spiritual needs on the basis of satisfying material needs.

4.2 Cultural edification: the main way to lead the realization of common prosperity of spiritual life

Cultural development is not only a basic construction to meet the cultural needs of the people and stimulate the vitality of cultural creation, but also a source of driving force for pooling social and cultural forces and promoting common prosperity in spiritual life. Through the cultivation of cultural industries in the whole society and the creation of cultural masterpieces, we will continue to promote the common prosperity of people's spiritual life with a scientific and advanced culture. Enhancing the cohesion, creativity and leading power of Chinese excellent traditional culture and advanced socialist culture is an important way to promote the realization of common prosperity of people's spiritual life now and in the future. By cultivating positive social culture to lead the development of mass culture, reform negative and vulgar culture, further excavate the contemporary value of our excellent traditional culture, integrate the socialist core values with the national spirit and the spirit of The Times, enrich the spiritual food and nourish the social fashion with positive social culture. In a word, the level and degree of common prosperity of people's spiritual life in the new era depends on the appeal and influence of social mainstream culture on people's spiritual world.

4.3 Practice cultivation: the value purport to lead the realization of common enrichment of spiritual life

According to historical materialism, man is a man in practice, carrying out practical activities and material production in the real society. Therefore, when grasping the needs of individual spiritual life, we should closely combine individual spiritual life with social life practice, so as to avoid the realization of common prosperity of spiritual life falling into abstract speculation or intuitive feeling. Individual's daily life practice is an important factor that affects their spiritual life needs and raises their spiritual life level. Ideological and political education should strengthen the guidance and promotion of practical activities in People's Daily life and permeate every aspect of individual social life by means of publicity, education and value guidance. By guiding people to meet their needs of spiritual life with correct practical activities, we can create conditions for realizing common prosperity of spiritual life. At the same time, ideological and political education should give targeted guidance according to the difference and diversity of social practice activities of different groups. Only by highlighting the "presence" of ideological and political education in guiding people's spiritual life can we continue to promote common prosperity of people's spiritual life in a deeper and wider range.

5. Conclusion

In short, the common prosperity of spiritual life is the highest level of individual development, but also the higher goal of social development, so the common prosperity of spiritual life is more special and more difficult to achieve. Common prosperity of spiritual life does not have inheritance and transmission. It must be realized by the labor and creation of the broad masses of the people. Only by realizing the needs of spiritual life in collective creation can we harvest happiness. To achieve common prosperity in the spiritual

life, we must guide, optimize and regulate the spiritual life of the people through ideological and political education, unify the common pursuit of the people for a better life, make the people actively participate in the spiritual consciousness of realizing the great rejuvenation of the Chinese nation, and depict the ideal picture of the new form of the spiritual civilization of the people in the new era.

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Advancing Plant Leaf Disease Identification Using Improved Residual Networks

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Abstract: In agriculture, crop yield and quality are critical for global food supply and human survival. Challenges such as plant leaf diseases necessitate a fast, automatic, economical, and accurate method. This paper utilizes deep learning, transfer learning, and specific feature learning modules (CBAM, Inception-ResNet) for their outstanding performance in image processing and classification. The ResNet model, pretrained on ImageNet, serves as the cornerstone, with introduced feature learning modules in our IRCResNet model. Experimental results show our model achieves an average prediction accuracy of 96.8574% on public datasets, thoroughly validating our approach and significantly enhancing plant leaf disease identification.

Keywords: Image Recognition; Transfer Learning; Deep Convolutional Neural Network; Deep Learning

1. Introduction

Under climate influence, numerous microorganisms like bacteria and fungi inhabit the air. Prolonged exposure renders plant leaves vulnerable to diseases, significantly impacting crop yield and quality, thereby limiting agricultural productivity. Precise identification of plant leaf diseases is vital for implementing effective preventive measures to enhance yield and quality while minimizing economic losses.

However, in remote areas, reliance on manual observation persists, necessitating observers with specialized knowledge and experience. Yet, this method is time-consuming, expensive, subjective, inefficient, and prone to misdiagnosis. Moreover, it is only applicable to small-scale cultivation. Therefore, traditional manual methods are impractical, replaced by automatic disease identification systems, which not only demonstrate high efficiency but also offer satisfactory accuracy.

With the rapid development of computer vision and deep learning technologies, especially the widespread application of Convolutional Neural Networks (CNNs), automatic extraction of image features has become the mainstream approach. Compared to traditional machine learning algorithms, CNNs can automatically learn and extract multi-level features. Additionally, their recognition capabilities and stability are stronger, effectively handling various types of plant leaf disease images, even maintaining high recognition accuracy in the presence of factors such as lighting and obstruction. In recent years, researchers have conducted in-depth studies on plant leaf and other parts (such as roots, flowers, and stems) disease recognition using deep neural networks and their corresponding improved algorithms. For instance, Jiang *et al.* ^[1] fused Support Vector Machine (SVM) with Convolutional Neural Network (CNN) to build a disease recognition model. They utilized CNN to extract features from rice leaf disease images and applied SVM for disease classification and prediction. Results showed the model achieved an average accuracy of 96.8%, demonstrating satisfactory performance. Deb *et al.* ^[2] initially discussed the impact of rice diseases on agricultural production and traditional detection method limitations. They suggested the potential use of artificial intelligence for early diagnosis. Additionally, they outlined the performance of five CNN models (Inception-V3, VGG-16, AlexNet, MobileNet V2, and ResNet-18) on a rice leaf disease image dataset. The study revealed Inception-V3 with the highest accuracy of 96.23%. Deb *et al.* ^[3] introduced LS-Net, a novel CNN model for rose plant leaf segmentation and recognition, outperforming existing models. Pandian *et al.* ^[4] presented a 5-layer CNN model using data augmentation and hyperparameter optimization for plant leaf disease identification. With outstanding average accuracy of

98.41% on the test set, their model surpassed other methods. Kaur *et al.* [5] proposed a CNN model for tomato leaf disease identification, achieving an impressive 98.92% accuracy based on InceptionNet, ResNet V2, and transfer learning. Omer *et al.* [6] introduced a tuned CNN model for healthy and diseased cucumber leaf identification, outperforming Inception-V3, ResNet-50, and AlexNet.

In this paper, using the innovative IRCResNet network, we aim to offer a more reliable and efficient solution for plant leaf disease recognition. We believe this research will advance methods for monitoring and controlling plant diseases, enhancing agricultural production efficiency and quality for sustainable development.

2. Methods and Principles

2.1 ResNet

ResNet, introduced by He *et al.* [7] in 2015, is a type of deep convolutional neural network. In order to address the issues of vanishing and exploding gradients in deep networks, they introduced residual connections, allowing input feature maps to be directly passed to subsequent layers. The constructed ResNet includes residual connections and multiple residual blocks, each composed of two or more convolutional layers. Equation (1) illustrates the working principle of residual blocks and residual connections.

$$X_L = H_L(X_{L-1}) + X_{L-1} \quad (1)$$

where X_L and X_{L-1} represent the output of layer L and $L - 1$ separately. H_L represents the transformation function of layer L , which may include operations such as convolution, batch normalization, and activation function.

2.2 CBAM module

The CBAM [8][9] module enhances CNN performance through an attention mechanism. It incorporates Channel Attention Module (CAM) and Spatial Attention Module (SAM) to concentrate on channel and spatial information in feature maps, adaptively adjusting weights. Embedding CBAM in different CNN architectures improves feature capture across scales and complexities. This attention mechanism has shown performance improvements in diverse computer vision tasks, such as image classification and object detection.

2.3 Inception-ResNet module

To boost deep neural network performance, one approach is increasing network depth. However, this can result in excessive parameters and higher computational resource consumption. To tackle this issue, the Inception-ResNet-A module [10] combines Inception module's multi-scale feature extraction with ResNet's residual connections, aiming to decrease computational complexity and parameter count.

2.4 Transfer learning

Transfer learning is a deep learning approach utilizing a CNN trained on one task as the starting point for another. Due to the computational resources required to build deep networks and the expense of training large datasets, transfer learning is widely used in practical applications. Instead of initializing weights from scratch during training, we use a pre-trained ResNet model on ImageNet [11]. The core process of transfer learning is as follows:

(1) Determine the base network:

Select the ResNet-50 model, load its pre-trained weight parameters.

(2) Build a new network structure:

Adjust the network structure for other layers, retaining some lower-level structures, to meet specific task requirements.

(3) Train the new model:

After constructing the new network, train the entire model to update weight parameters.

3. Model construction

ResNet, with its residual connections, excels in feature extraction, addressing gradient vanishing and exploding issues, enabling support for deeper network structures. The introduction of CBAM, incorporating CAM and SAM modules, enhances the model's focus on crucial image regions. In transfer learning, we integrate Inception-ResNet-A and CBAM modules into the base network, creating IRCResNet for plant leaf disease identification. Adjustments to the pretrained model's structure include:

(1) Remove the last 3 bottleneck structures of the third layer and the entire fourth layer.

(2) Retain the final fully connected layer.

(3) Introduce a dual-branch structure after the removed layers, housing the CBAM and Inception-ResNet-A modules.

The IRCResNet model, illustrated in Figure 1, comprises the base network (ResNet-50) for feature extraction and the head network with dual branches. One branch features the Inception-ResNet-A module for multiscale feature extraction, while the other uses the CBAM module to extract features in affected areas, specifically local features.

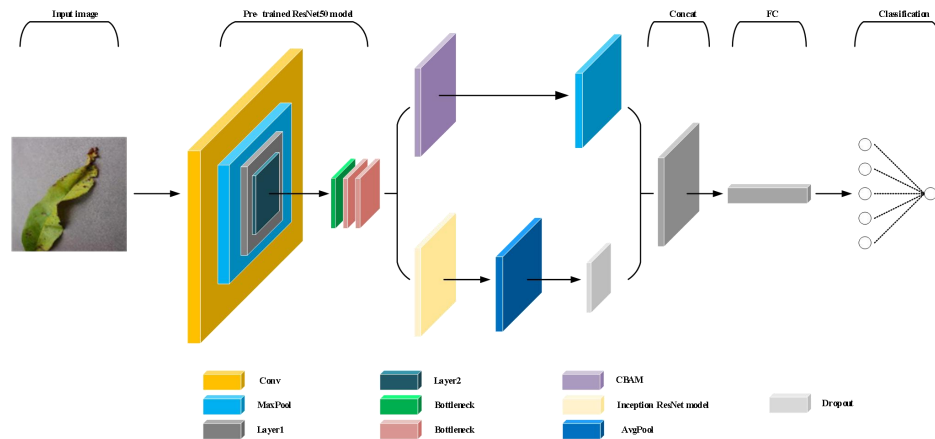


Figure 1. Schematic diagram of the network structure of the IRCResNet model.

4. Numerical experiments

4.1 Image data acquisition

First, we chose apple, corn, and potato leaf images from the Plantvillage public dataset^[12]. Following several preprocessing steps, such as resizing, deduplication, and excluding unidentifiable images, we acquired a smaller public dataset with eight types of diseased leaves and three types of healthy leaves, totaling 9174 images. Afterward, we partitioned this dataset into training, validation, and test sets in a 6:2:2 ratio. Figure 2 illustrates the symptoms of plant leaf diseases in this dataset.

4.2 Experimental platform and evaluation indicators

The experiments in this article utilize the PyTorch framework, and training is expedited on experimental devices with GPUs. The hardware configuration is: Intel(R) Xeon(R) Platinum 8157 CPU @ 2.30GHz; two NVIDIA GeForce RTX 3090 GPUs, each with 24GB of memory; PyTorch 1.7.1; Python 3.8; CUDA 11.0; CUDNN 8.0. To assess various model performances, we choose four image classification metrics: *Accuracy*, *Precision*, *Recall*, and *F1 – Score*. Formulas (2-5)^[13] illustrate the calculation methods for these metrics.

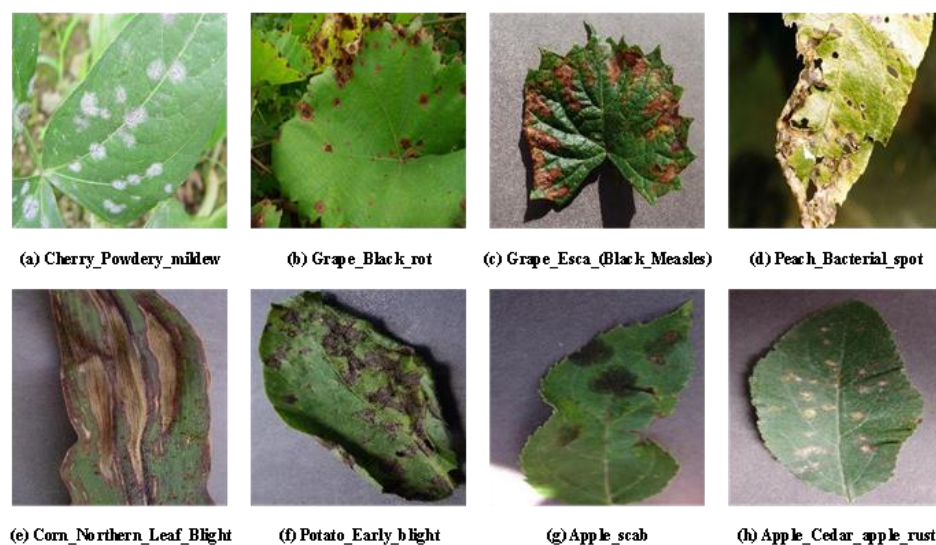


Figure 2. Schematic diagram of plant leaf disease symptoms.

$$Accuracy = \frac{TP+TN}{TP+TN+FP+FN} \quad (2)$$

$$Precision = \frac{TP}{TP+FP} \quad (3)$$

$$Recall = \frac{TP}{TP+FN} \quad (4)$$

$$F1 - Score = \frac{2 \times Precision \times Recall}{Precision + Recall} \quad (5)$$

4.4 Experimental results and analysis

We tested the proposed IRCResNet model on the public dataset and documented its performance, comparing it with other benchmark models on the same dataset, as detailed in Table 1. By analyzing the data in this table, it is evident that the proposed model demonstrates promising results, surpassing current popular methods in image recognition. Specifically, our model exhibits the highest average prediction accuracy, reaching 96.8574%. Furthermore, our model outperforms benchmark models in other evaluation metrics. To further explore the classification effectiveness and validate the improved accuracy, we also present the predictive capabilities of the model through a confusion matrix, as illustrated in Figure 3.

Table 1 Performance comparison of different models on the public dataset (%).

Model	Accuracy	Precision	Recall	F1-Score
VGG-19	82.4656	80.1854	80.4862	80.7562
ResNet-50	91.4263	91.7521	91.2285	91.8624
EfficientNet-B0	86.1982	84.2542	86.1923	85.7214
IRCResNet	96.8574	96.8043	95.8953	95.5231

Among them, 0-10 represent the labels of various plant leaf images in the dataset (corresponding to the disease types from a to h in Figure 3). It can be observed that the model in this article accurately identifies most disease types, with only a few being either unidentified or incorrectly identified. Thus, it can be demonstrated that the model proposed in this paper is effective and addresses the issue of low accuracy in identifying plant leaf diseases.

5. Conclusion

The rapid and precise identification of plant leaf diseases is vital for crop yield and quality. Thus, finding a rapid, automated, cost-effective, and accurate method is crucial. Deep learning, particularly Convolutional

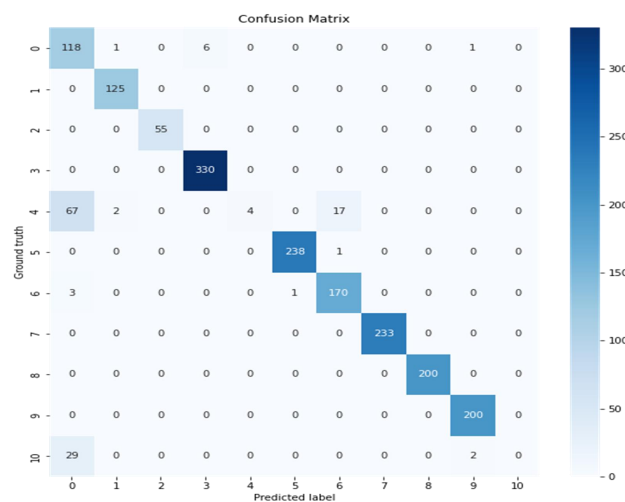


Figure 3. Confusion matrix generated when using the IRCResNet model to identify plant leaf diseases.

Neural Networks (CNNs), has excelled in classifying plant leaf diseases. In this paper, we introduce IRCResNet, a novel deep

learning architecture. It employs the pre-trained ResNet-50 model on ImageNet and other feature learning modules for transfer learning. This enhances feature extraction and reduces computational complexity by introducing a new fully connected Softmax layer to truncate the network's top. IRCResNet not only improves feature extraction but also reduces computational complexity without compromising accuracy. Experimental results showcase the model's exceptional performance on a plant leaf disease image dataset. In the future, we aim to deploy this model on mobile devices for automated monitoring and identification of plant leaf diseases. Furthermore, we intend to apply it to a wider range of practical scenarios.

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Research on the Application of Mechatronics Technology in Intelligent Manufacturing

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Abstract: In the process of China's industrial modernization development, intelligent manufacturing is one of the very important links, in the promotion of social development and economic development plays an important significance, therefore, it is necessary to maximize the level of intelligent manufacturing. As an important technical means in intelligent manufacturing, mechatronics technology has very great application advantages, which can not only promote the production efficiency and product quality, but also effectively reduce the cost of expenditure. This paper will study the application of mechatronics technology in intelligent manufacturing.

Keywords: Mechatronics Integration Technology; Intelligent Manufacturing; Application Research

Introduction

With the level of science and technology, more and more emerging technologies, electromechanical integration technology integrates control technology, computer technology and information technology and other fields, and widely used in industrial production, not only can improve the level of our manufacturing intelligence, but also can promote industry transformation goals. Now people's demand for products changes with the development of The Times, the traditional artificial manufacturing has no way to meet the needs of the development of the current society, through the application of mechanical and electrical integration technology can promote intelligent manufacturing level to informatization and intelligent development path, to achieve the main goal of double improve production effect, this can effectively meet the demand of the actual development of the current society, prompting our country industrial production in the complex market environment can keep healthy and stable development, and boost the rapid development of national economy in our country.

1. Overview of mechatronics technology and intelligent manufacturing

Intelligent enterprise, intelligent supply chain and intelligent factory is a key part of intelligent manufacturing, intelligent manufacturing contains big data, Internet, Internet and cloud computing and other advanced technology, can promote intelligent and automation manufacturing goals, and the integration of modern manufacturing technology and the latest information technology, such as: artificial intelligence technology, can manufacturing process efficiency, flexibility, adaptability and restructuring, and so on. Electromechanical integration technology is an important technology of intelligent manufacturing, it is a combination of computer, mechanical and electronic, and so on many technologies, the technology of integration system, can promote equipment and production process to flexible control, intelligent control and automatic control, thus the manufacturing quality and manufacturing efficiency. Mechatronics technology is widely used in various fields, and has the highest application value in intelligent manufacturing. The adoption of electromechanical integration technology can promote the production process to achieve the purpose of reconstruction, produce according to the actual production needs, quickly change the production line layout, and support the manufacturing applications of different cycles, and use conveyor belt and robot automation devices to carry out welding, assembly and processing work. In addition, using sensors and embedded system facilities can adjust and visually monitor the machine and the production process in real time, and analyze it with cloud big data, so as to achieve the purpose of maintaining the machine, optimizing quality

management and planning production. Therefore, the application of mechatronics technology in intelligent manufacturing can promote the coordinated development of the two, so as to bring more advantages to the production mode in the manufacturing field.

2. Application of mechatronics technology in intelligent manufacturing

For intelligent manufacturing and electromechanical integration technology, has a certain correlation between the two, electromechanical integration technology is the field of multiple technology together, has a very obvious advantage, the technology is applied in intelligent manufacturing, to the role of electromechanical integration technology value efficient play out, prompting industrial can achieve transformation goal. At present, in industrial practice, mechatronics technology has been widely used in it, and plays a great role in improving product quality and production efficiency. However, intelligent manufacturing can fully reflect the application advantages of electromechanical integration, through the use of computer technology to simulate the production of products, can effectively optimize the allocation of resources, but also can reduce the production cost of the enterprise to the maximum, so as to promote the economic benefits of enterprises to reach the highest point^[1].

2.1 Transducer technology

Because intelligent manufacturing will not be constrained by human resources, it can maximize the economic benefits of enterprises and the production efficiency of machinery. The application of the electromechanical integration sensor technology in intelligent manufacturing can effectively ensure the accuracy of the control system operation. In the production stage of manufacturing industry, wireless sensors are usually used to carry out information collection. After the collection, the information will be automatically transmitted to the computer terminal system, and finally the staff will use appropriate information technology to process the information. Through the application of sensor technology can effectively monitor the whole process of intelligent manufacturing, can find the various problems in the production process in time, and can be solved in time. And, applied in intelligent manufacturing electromechanical integration sensor technology, can improve the stability and accuracy of wireless sensor, can effectively break the traditional information existing in the process of intelligent manufacturing, can at any time in the information terminal process supervision and access to information, etc., to ensure that intelligent manufacturing can be stable and orderly, also can be to a certain extent will maximize manufacturing speed. Therefore, the scientific and reasonable application of sensor technology can improve the production efficiency of intelligent manufacturing, but also promote the field of intelligence to a new level.

2.2 Numerical control technique

One of the important links of industrial production is the field of machinery manufacturing. In order to promote the rapid development of the field of industrial intelligent manufacturing, we should keep up with the pace of the development of The Times, and constantly update the production technology mode. In intelligent manufacturing, intelligent control technology is one of the very important technologies, the application of this technology in the CNC production stage, can effectively collect and organize information data, but also can further improve the control effect. In the process of applying numerical control technology, production accuracy control is a very important link. The application of intelligent system in the fuzzy control of the production line can effectively optimize the accuracy of storage equipment. However, in the modern industrial production, numerical control technology is a very important mode of production, which can promote the modern industry to achieve the goal of flexible automation. At present, in the field of intelligent manufacturing, numerical control technology mainly adopts the operation mode of CPU + bus, which can promote the intelligent manufacturing to achieve the goal of 3 d simulation^[2].

2.3 Industrial intelligent robot

With the continuous development and progress of science and technology, the industrial intelligent robot has long since become the key technology in the electromechanical integration technology. Industrial intelligent robot combines automatic control technology, bionic technology and structure technology and many other new technologies. Due to the gradual improvement of product design capability, the output capacity of intelligent manufacturing field needs to be further improved in order to keep pace with the development of The Times. In addition, industrial intelligent robot technology can effectively reduce the cost of labor, and has a very strong adaptability, whether in a good environment or bad environment can be stable production, and can effectively reduce the probability of accidents in the process of intelligent production, so as to greatly improve production safety. Although the cost of

industrial intelligent robot is very high, but the use of life is relatively long, also can highly maintain 24 hours operation advantage, these are the traditional human production cannot achieve, so, in the application in intelligent manufacturing electromechanical industrial intelligent robot is the inevitable trend of the current development, related enterprises must recognize the important role of industrial intelligent robot, increase its application, so as to promote industrial intelligent robot in the field of intelligent manufacturing can be effectively promoted and application.

2.4 Production line construction

In terms of the current production line construction in China's intelligent manufacturing, most of them have reached the goal of automation and mechanization of production, and the demand for manpower in the traditional production mode has been gradually reduced. The application of mechatronics integration technology in the production line construction of the intelligent manufacturing can further deepen the degree of automation production, but also effectively improve the production process, and promote the operation efficiency of the production line can be maintained in high speed operation. When applying the mechatronics technology to the production line, the production line modules must be effectively adjusted according to the actual situation to ensure that the mechatronics technology is highly consistent with the intelligent manufacturing production line. In addition, in the application process, the corresponding perfect supervision system and management system should be formulated, so that the whole process of the application of mechatronics technology can be effectively supervised. At the same time, regular maintenance and overhaul should be carried out, so as to ensure that the production line can always maintain efficient operation^[3].

Epilogue

In a word, in intelligent manufacturing, electromechanical integration technology has a very important position, not only can promote the manufacturing industry to be effective transformation, but also can promote the industry to achieve the goal of intelligence and automation. Therefore, it is necessary to deeply study and develop the electromechanical integration technology, and reasonably apply it according to the actual situation in the intelligent manufacturing, so as to promote the manufacturing industry to develop in a better direction, so as to provide strong technical support for the manufacturing field.

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Research on E-Commerce Communication Model of Rural Youth

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Abstract: Through the research on the communication mode of rural youth e-commerce, the paper puts forward that there are some advantages and many problems in the e-commerce engaged in.

Keywords: Communication Mode; Narrow Broadcast; Brand Innovation

1. Background

With the rapid development of Internet technology, e-commerce has become an important force in promoting economic development. In vast rural areas, the e-commerce industry has gradually emerged, solving problems such as time and space, and becoming a new driving force for economic development in rural areas. However, due to the constraints of regional, economic, cultural and other factors, there are many problems in the development of rural youth e-commerce.

This article aims to explore the construction and optimization of e-commerce communication models for rural youth. Take Shanghe County, Jinan City, Shandong Province, a national comprehensive demonstration county for e-commerce into rural areas, as an example to illustrate the comprehensive demonstration of e-commerce in rural areas nationwide.

2. Research on the communication model of rural youth e-commerce:

2.1 The main body of communication.

The main body of communication is the first element of communication activities. Rural youth e-commerce is a new force in rural e-commerce and the mainstay in the revitalization of rural revitalization talents. They were either born in their hometown and never left, or they returned to their hometown after studying and starting a business abroad, imprinted with the characteristics of the countryside, the Internet, and youth. They either sit directly in the live broadcast room and act as anchors themselves, trying their best to attract attention and earn traffic; or they spend all day long in short videos and online commerce, studying the characteristics and rules, and strategizing behind the screen. For those young e-commerce merchants who have returned to their hometowns to start businesses, the audience itself is also curious about their entrepreneurial stories. Therefore, the story of the live broadcast and the story of the live broadcast subject have dual identities. At the same time, the anchor will also work with the audience to create the "agenda setting" for the day's live broadcast. Based on the topics raised by the audience, we can construct a common context in a timely manner, provide the audience with various popular sciences, and empathize with the audience. A live broadcast is both selling goods and products.

2.2 Communication content: Narrow, refined, and global

Rural youth e-commerce companies mostly go after a certain product or products. Therefore, most of their short videos, live broadcasts, and sales contents are precise and narrow. The communication content is not audience-centered, but farming season-oriented. Different from the dazzling array of products in urban live broadcast rooms, rural e-commerce, especially youth e-commerce, mostly focus on rural brands and promote and sell three agricultural products. For example, agricultural specialty products, especially those that are difficult to store during the season, will be promoted and sold by e-commerce companies in a centralized manner to avoid the disadvantages of items rotting when stored for a long time. This results in the audience not only seeing the harvesting scenes of fruits, pears and peaches on the screen, but also seeing these real objects. But there are also disadvantages.

Once the farming season deviates from people's consumption habits, the products will not be easy to sell.

2.3 Communication channels

E-commerce companies in rural areas can break through the limitations of time and space and promote agricultural and sideline products in the fields to audiences across the country and even around the world. The increasing maturity of self-media technology has broken the single communication channel. Everyone is a self-media, society is pan-entertainment, rich and colorful communication channels, and cross-platform communication allow both parties to interact easily and in real time, increasing stickiness.

2.4 Communication audience

In this era where everyone is a self-media, the boundaries between communication and reception are becoming increasingly blurred. The audience is the audience in the e-commerce live broadcast room, but he can interact with the communicator in real time and jointly form a Communicator of hot topics. The receiver no longer simply understands the content sent by the sender, but learns more about the sender's story. Even, in a common semantic space, the stories of both the sender and the receiver are transmitted in the same live broadcast room. The use and gratification mentality is greatly satisfied. The entrepreneurial stories of rural youth e-commerce and the content they promote have become hot topics, and the audience enjoys the freshness and satisfaction brought by the fresh perspective.

2.5 Communication effect

From the cognitive level, the communication effect has increased people's knowledge accumulation about rural revitalization, rural e-commerce, and youth groups, and constantly refreshed people's cognition. From a psychological and attitude level, it also causes people's emotional and psychological changes in terms of concepts or value systems. The rise of rural youth is changing the current situation of rural hollowing out, forming a closed loop between cities and rural areas, and promoting positive interaction.

3. Characteristics Analysis and Optimization Plans

The "China E-Commerce Report" shows that from 2020 to 2021, national online retail sales and other data are increasing year by year.

	(trillion yuan) online retail sales	(trillion yuan) Rural online retail sales	(trillion yuan) Online retail sales of agricultural products
2020	11.76	1.79	4158.9
2021	13.09	2.05	4221
2022	13.79	2.17	5313.8

From: "China E-Commerce Report"

In the statistics of Shanghe County, a national e-commerce demonstration county, are as follows: In 2021, Shanghe County's annual online retail sales were 180,200 yuan, a year-on-year increase of 158.7%. Among them, the online retail sales of agricultural products were 356.768 million yuan, a year-on-year increase of 1154.2%.

In 2022, the county's online retail sales were 3.629 billion yuan, a year-on-year increase of 101.4%, which was 97.4 percentage points higher than the national growth rate.

According to Li Qingwu, the person in charge of the local e-commerce industrial park, when promoting the e-commerce village chief live broadcast plan in remote villages, they need to prepare some gifts, such as pots and pans, etc. to attract people to participate. But in Shanghe County, they didn't use a gift. The reason is that between 2016 and 2020, Shanghe County has been building an e-commerce live broadcast platform. During the 2020 epidemic, the local county magistrate, who was born in the 1980s, carried out live broadcasts to bring goods, boosting a wave of e-commerce live broadcasts from top to bottom. At the same time, Shanghe County seizes the opportunity of the rural revitalization policy and takes the creation of a national comprehensive demonstration county for e-commerce into rural areas as the starting point. It allocates 10 million yuan in special support funds every year, focusing on four aspects: carrier construction, talent cultivation, upstream services, and characteristic brands. The key point is to promote the development of the e-commerce industry. At present, there are more than 50,000 e-commerce employees in the county, of which 60% are young e-commerce workers under the age of 40.

The communication content is refined and the communication subjects are active, but there are also problems such as the fragmentation of the communication chain and the pursuit of excessive communication effects while ignoring the brand.

The author recommends optimizing from the following aspects.

(1) Brand innovation, communication content is accurate and warm

content is king and is still the core of short videos and e-commerce live broadcasts in the Internet era. Brand innovation must focus on content and cannot stay in the superficial stage of buying traffic and traffic is king. . Explore vertical content areas and truly discover brands with local culture. Culture is attached to products, and only when products reflect local sentiments can a brand be formed. The content should pay more attention to practicality and emotion, and avoid excessive entertainment and fragmentation;

(2) Dig into the rules of e-commerce and create a top live broadcast room

E-commerce's audience-oriented approach, e-commerce's service awareness, and brand promotion awareness are all aspects that the real economy should grasp well. Behind e-commerce are excellent products and a strong real economy, which can truly promote social progress. The communication of e-commerce, especially youth e-commerce, should not only change the old thinking, but also dig deep into the laws of e-commerce and create ace live broadcast room. At present, there are many young people in rural areas across the country who are successful in e-commerce. However, to truly build an influential live broadcast room, young people who are well versed in the laws of e-commerce and digital media are needed. Bringing goods to promote agriculture, rural areas and farmers is not something that can be done quickly. It requires young people to lay down their skills, truly understand the laws of e-commerce, and use the laws of communication to create a flagship live broadcast room whose content and format meet the needs of the audience. For example, many live broadcast rooms only rely on good products and services, but in fact, China's local culture has not been deeply explored and promoted. For example, like the Li Ziqi phenomenon, there should be such phenomenon-level live broadcasts among youth e-commerce appear in between.

(3) Increase investment and training to form a talent echelon that understands e-commerce communication. The current youth return home plan, college student talent plan, etc. attract young people from multiple aspects such as policy and economy. However, due to the low entry threshold for e-commerce, there are certain difficulties in actual development and growth of e-commerce, which requires strong support from government departments. In addition, communication rules should be combined with e-commerce and deeply integrated to create high-quality talent e-commerce and youth e-commerce.

The rise of rural youth e-commerce is due to the background of rural revitalization and the rise of Internet technology and self-media. While its rapid development has also exposed some shortcomings. High quality content, innovation in communication methods, and in-depth exploration of local culture need to be addressed and improved. A win-win situation between traffic and quality can truly capture the hearts of the audience. In the future, rural youth e-commerce will be a new force in the high-quality development of rural areas and the development and growth of the real economy.

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The Role of Informatization in the Integrated Development of Cultural and Tourism Industry

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Abstract: This article explores the role of informatization in the integration and development of the cultural and tourism industry, and proposes corresponding analysis and strategies. Firstly, informatization improves the quality and efficiency of cultural and tourism products and services by enhancing the design and production process and personalizing and customizing the services. Secondly, informatization expands the boundaries of cultural and tourism products and markets by utilizing the internet and mobile applications to extend the spatial and temporal boundaries, and leveraging data analysis and intelligent technologies to broaden the scope and scale. Lastly, informatization enhances the management and operational level of the cultural and tourism industry, improving efficiency and decision-making through the use of advanced technologies such as big data and artificial intelligence.

Keywords: Informatization; Cultural and Tourism Industry; Integration and Development; Challenges; Strategies

1. Introduction

In recent years, the rapid development of informatization has had profound impacts on various sectors, especially the cultural and tourism industry. The integrated development of the cultural and tourism industry, with the integration of tourism resources and cultural elements, has become a vital force driving China's economic transformation and upgrading. However, there are significant regional disparities in China's informatization development, forming a distinct tiered pattern.

According to the China Informatization Development Index, Guangdong, Zhejiang, Beijing, Jiangsu, and Shanghai are in the first tier, scoring above 0.63, creating a notable gap with other provinces and municipalities. Among them, Guangdong ranks first nationwide with a score of 0.80, while Zhejiang and Beijing tie for second place with a score of 0.71. These regions have invested significantly in informatization, resulting in mature information technologies and internet infrastructure.

However, apart from the first-tier provinces and municipalities, there are thirteen provinces and municipalities in the second tier, including Shandong, Sichuan, Fujian, Chongqing, Shaanxi, Hubei, Anhui, Liaoning, Tianjin, Henan, Hunan, Jiangxi, and Hebei, with scores ranging from 0.29 to 0.46. These regions still have room for improvement in informatization development and require enhanced technological infrastructure and innovation capabilities^[1].

In light of these circumstances, this study aims to explore the role of informatization in the integrated development of the cultural and tourism industry and analyze the disparities and development levels of different regions in terms of informatization. It also aims to provide strategies and suggestions for promoting the integrated development of the cultural and tourism industry. Through in-depth research on the application and impacts of informatization in the cultural and tourism industry, it can provide strong support for achieving high-quality development in the cultural and tourism industry and driving China's economic transformation and upgrading.

2. Analysis of the Role of Informatization in the Integrated Development of the Cultural and Tourism Industry

2.1 Enhancing the Quality and Efficiency of Cultural and Tourism Products and Services

2.1.1 Improving the design and production process of cultural and tourism products using information technology

Information technology plays a significant role in enhancing the quality and efficiency of cultural and tourism products and services. By utilizing information technology, the design and production processes of cultural and tourism products can be improved, leading to increased innovation and better quality control, thereby enhancing customer experience. According to statistics, cultural and tourism products designed and produced using information technology have received higher ratings and generated higher sales in the market. For example, in the informationization transformation of a certain resort, the introduction of virtual reality technology allows visitors to have virtual experiences and interactive tours before making reservations, greatly enhancing the attractiveness and predictability of the tourism products. Such changes not only improve product quality but also increase production efficiency and reduce costs. According to a study, the adoption of information technology in cultural and tourism product production has resulted in an average increase in production efficiency of 20%.

2.1.2 Utilizing Informatization to Enhance Personalization and Customization of Cultural and Tourism Services

Information technology provides feasible solutions for personalization and customization of cultural and tourism services. Through data collection, analysis, and processing, cultural and tourism companies can gain in-depth understanding of customer needs and preferences, enabling targeted customization of services. According to surveys, cultural and tourism companies that utilize information technology for personalized services have seen an average increase in customer satisfaction of over 30%^[2]. For example, a travel agency implementing an intelligent tourism guide system can provide personalized travel routes and recommended attractions based on customer interests and preferences, greatly enhancing customer satisfaction and experience. The application of informatization enables cultural and tourism products and services to better meet consumer needs, improve quality and efficiency, and bring higher competitiveness and profitability to enterprises.

2.2 Expanding the Boundaries of Cultural and Tourism Products and Markets

2.2.1 Extending the spatial and temporal boundaries of cultural and tourism products and markets through the internet and mobile applications

Informatization plays a crucial role in expanding the spatial and temporal boundaries of cultural and tourism products and markets. Through the internet and mobile applications, cultural and tourism products are no longer limited by physical locations or time constraints, allowing them to reach a wider audience and operate beyond traditional boundaries. For instance, online booking platforms and virtual tour experiences enable potential tourists to explore destinations and purchase tickets anytime and anywhere. This has significantly expanded the reach of cultural and tourism products, breaking down geographical barriers and attracting a larger number of tourists. According to research, the integration of internet technology has resulted in an average growth rate of 15% in online bookings within the cultural and tourism industry.

2.2.2 Expanding the scope and scale of cultural and tourism products and markets through data analysis and intelligent technologies

Informatization enables the expansion of the scope and scale of cultural and tourism products and markets through data analysis and intelligent technologies. Big data analytics allows for a deeper understanding of consumer preferences, market trends, and demand patterns, facilitating the development of innovative products and targeted marketing strategies^[3]. Moreover, intelligent technologies such as AI-powered recommendation systems and personalized marketing algorithms further enhance the effectiveness of cultural and

tourism product promotion. By leveraging these technologies, cultural and tourism enterprises can tailor their offerings to specific customer segments and create personalized experiences, thereby increasing customer satisfaction and loyalty. Research shows that the application of intelligent technologies has led to an average revenue growth of 20% in the cultural and tourism industry.

2.3 Enhancing the Management and Operational Level of the Cultural and Tourism Industry

2.3.1 Improving management efficiency and decision-making through informatization in the cultural and tourism industry

Informatization plays a crucial role in improving management efficiency decision-making in the cultural and tourism. By adopting information systems and technological tools, cultural and tourism enterprises can streamline their internal processes, automate routine tasks, and facilitate more efficient communication and collaboration among teams^[4]. This leads to improved operational efficiency and reduced costs. Research has shown that the implementation of informatization in the cultural and tourism industry has resulted in an average increase of 25% in management efficiency.

Furthermore, informatization provides valuable data and analytics capabilities that enable data-driven decision-making in the industry. Through the collection, integration, and analysis of vast amounts of data, cultural and tourism enterprises can gain insights into consumer behavior, market trends, and operational performance. This empowers decision-makers to make informed and strategic decisions, resulting in better resource allocation, targeted marketing campaigns, and optimized business operations. For instance, the utilization of big data analytics allows cultural and tourism enterprises to identify customer preferences and tailor their offerings accordingly, leading to higher customer satisfaction and improved business performance. Research has shown that leveraging big data and analytics technologies has led to an average revenue increase of 18% in the cultural and tourism industry.

2.3.2 Optimizing the operation and resource allocation of the cultural and tourism industry through big data and artificial intelligence technologies

Informatization enables the optimization of operation and resource allocation in the cultural and tourism industry through the utilization of big data and artificial intelligence (AI) technologies. Big data analytics provides valuable insights into consumer preferences, market demands, and resource utilization, allowing cultural and tourism enterprises to allocate their resources more effectively^[5]. AI technologies, such as intelligent recommendation systems and revenue management systems, help optimize pricing strategies, resource allocation, and customer experience personalization. This leads to improved operational performance and enhanced profitability. Research shows that the application of AI technologies has resulted in an average cost reduction of 15% and an average revenue increase of 22% in the cultural and tourism industry.

3. Conclusion

Informatization plays a crucial role in the integrated development of the cultural and tourism industry. It enhances the quality and efficiency of cultural and tourism products and services, expands the boundaries of products and markets, and improves the management and operational level of the industry. However, challenges such as data security and talent development need to be addressed. By leveraging the opportunities and overcoming the challenges, the cultural and tourism industry can achieve high-quality development and contribute to the transformation and upgrading of the Chinese economy.

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Mathematical Modelling-Based Conservation and Digital Reform of Poyang Fishing Songs

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Abstract: This study aims to apply mathematical modelling methods focusing on the fishing songs of Poyang Lake for its conservation and digital reform. Through the principles of abstraction, model building and parameter estimation of mathematical modelling, we will quantitatively analyse the efficiency of cultural heritage and the degree of influence of digital reform. Specific methods include time series analysis, data mining and optimisation models. These tools will provide theoretical support and quantify the complexity of the problem by introducing corresponding mathematical models and formulas.

Keywords: Mathematical Modelling; Poyang Fishing Song; Digital Reform; Fishing Song Conservation

1. Introduction

The fishing song of Poyang Lake represents the intangible cultural heritage of Jiangxi, which contains rich cultural and musical values. This paper focuses on how mathematical modelling methods can be used in order to study and protect this valuable cultural heritage in depth. Mathematical modelling is a powerful tool for solving practical problems, and its basic principles include problem abstraction, model building and parameter estimation. We will apply these principles to the problem of fishing songs at Poyang Lake in order to create appropriate mathematical models to quantify the efficiency of cultural heritage and the degree of impact of digital reform. Specific methods such as time series analysis, data mining and optimisation modelling will provide us with powerful tools for in-depth study of the connotations and historical evolution of this intangible cultural heritage.

2. The Basic Connotation and Contemporary Development of Poyang Fishing Songs

2.1 History and Cultural Connotation of Poyang Fishing Songs

Since ancient times, the land of Gan Poyang has been a famous land of fish and rice. Li Tiaozhi's "Notes on South Vietnam" said, "The Yue people are good at singing, and they sing whenever there is an auspicious occasion". "The granary is rich in manners, the clothes and food are sufficient, and one knows honour and disgrace" (from "The Records of the Grand Historian - Guan Yan Liezhuan") life is colourful and full of the culture of country customs and rituals. In the change of history, Poyang Lake area has witnessed economic and cultural prosperity. At the end of Ming and the beginning of Qing Dynasty, many kinds of traditional music emerged, among which Poyang fishing song is the representative. According to the legend, in the Daoguang period of Qing Dynasty, Hubei artist Shuai Dehua introduced the art of fishing song into Poyang Lake area, and the oral and mental teaching of the artistes over the generations has made it a local traditional music form with great characteristics of Poyang Lake. Poyang Fishing Song carries the characteristics of labour and unique repertoire, ethnic singing, accompaniment and dance, recording the progress and development of regional traditional art civilization. It is a part of the cultural wealth of Jiangxi Province and an "artistic treasure" of Poyang Lake area.

2.2 Artistic Characteristics and Contemporary Development of Poyang Fishing Songs

2.2.1 Artistic Characteristics of Poyang Fishing Songs

Poyang Fishing songs are generally in seven-character stanzas, two-stanza or four-stanza style, with the two-stanza style consisting of two stanzas above and below, with the main focus on succession, while the four-stanza style embodies the principle of "beginning, end, and end". In terms of tuning, the most common mode is the levistic mode, followed by the angular mode. The melodic composition is mostly motivated by a major second + minor third triad, and in the smooth progression, big jumps are inserted upwards, such as pure fifths and minor sixths, reflecting the sense of openness and expansiveness.

The melody has more decorative notes, such as leaning and sliding. In terms of rhythm, the syncopated rhythm is the most typical, showing the dynamics of rippling water. For example, in "Four Seasons Fishing Song" ("Good Scenery on Poyang Lake") of Poyang Fishing Song, its typical features such as melodic "freedom", five and six degree jumps, syncopated rhythms and so on, are reflected in most of this folk song. The lyrics include folklore, civil affairs, lyrics and scenery, etc., which are more colloquial, with "ai, ah, na, yo" like other fishing songs (see music example 1), with the musical style brought by the local language of Poyang Lake Basin.

5 6 1 6 5 3 | 5 - | 3. 5 6 5 6 1 | 5. 3 5 |
满 湖 荡。(外呀外呀外子哟),
一 网 粮。(外呀外呀外子哟),
心 欢 畅。(外呀外呀外子哟),
好 撒 网。(外呀外呀外子哟),
3 2 3 5 3 | 2 3 2 1 6 | 5 6 1 6 5 3 | 5 - :||
丰 收 的 渔 歌 (呀) 满 湖 荡。
一 网 个 渔 虾 (哟) 一 网 粮。
渔 家 个 儿 女 (哟) 心 欢 畅。
正 是 个 渔 家 (哟) 好 撒 网。

Score 1: The Four Seasons' Fishing Song, bars 1-8

2.2.2 Cultural Value of Poyang Fishing Songs

The theory of value transmission emphasises that culture is an important way of value transmission, and music transmits social values and moral norms through lyrics and melody, which helps to shape the values of individuals. Poyang fishing songs carry the historical stories and cultural memories of the Poyang Lake area and record the social, cultural and spiritual outlook of the area in the past, and it has unique artistic expressions and aesthetic concepts. Experimental studies by social psychologist Muzafer Sherif have shown that shared experience and cooperation can promote group cohesion and willingness to cooperate, and that music, as a kind of shared experience, has the potential to promote social cohesion. Intangible cultural exchanges are often an important part of community and collective activities, and they can facilitate communication and interaction between people. By enjoying and participating in compilations and performances together, people increase opportunities for mutual understanding and friendship, while at the same time strengthening community cohesion and identity.

In conclusion, intangible cultural heritage such as Poyang Fishing Song has rich cultural value, which is not only the music treasury of an ethnic group or region, but also an important link between the past and the present, and between different cultures.

3. Mathematical modelling and analysis

3.1 Mathematical modelling approach

(1) Problem abstraction: Mathematical modelling requires the abstraction of real-life problems. This principle emphasises the importance of translating problems into mathematical form, and problem abstraction is the key to successful mathematical modelling (Bäck, 1997). Therefore, we need to properly abstract the problem of conservation and digital reform of fishing songs in Poyang Lake in order to apply mathematical modelling methods.

(2) Model building: creating a mathematical model is the core of mathematical modelling(Georgi N,2016). Mathematical modelling of the fishing song problem at Poyang Lake requires the creation of a mathematical model that reflects the nature of the

problem.

(3) Parameter estimation: Parameter estimation is a key step in mathematical modelling. It involves determining the parameters in a mathematical model so that the model can better fit realistic data. The principles of parameter estimation are supported by a wide range of theories, including the principles of parameter estimation in statistics (Hoang, 2022).

3.2 Overview of specific methodologies

(1) Time series analysis: time series analysis is a method commonly used to deal with time series data. It includes trend analysis, cyclical analysis and seasonal analysis of data (Almut E. D, 2017). For the data of fishing songs in Poyang Lake, time series analysis will help to understand its historical evolution and future trends.

(2) Data mining: data mining is a method of extracting useful information from large-scale data. It can be used to analyse the cultural connotation, characteristics and influencing factors of fishing songs (Khanbabaei, 2018). Through data mining, we can gain an in-depth understanding of the cultural value and inheritance process of fishing songs in Poyang Lake.

(3) Optimisation model: Optimisation model is a method used to solve complex problems. It can be used to optimise resource allocation, decision making and other problems (Yuhan Hu, 2023). In the conservation and digital reform of the fishing song of Poyang Lake, the optimisation model can be used to optimise the allocation of resources in order to achieve the best conservation and inheritance effect.

These basic principles and specific methods of mathematical modelling will provide strong tools and theoretical support for our research on the conservation and digital reform of the fishing songs of Poyang Lake.

3.3 Specific Methods of Mathematical Modelling of Poyang Fishing Songs

(1) Data collection and organisation: sources of data include historical recordings, audio files, performance data, etc (Luenberger, 2008). Data collation needs to refer to the methodology of Introduction to Data Mining (Tan, Steinbach, & Kumar, 2006) to ensure the quality and usability of the data.

(2) Data pre-processing: the data pre-processing stage will apply the methods in Data Analysis and Data Mining (Berry & Linoff, 2004), including data cleansing, missing value processing and outlier detection. These steps help to ensure data quality and prepare for subsequent analyses.

(3) Time series analysis: the basic principles of time series analysis methods include lag correlation, smoothness test and seasonal decomposition. These principles are described in detail in Time Series Analysis (Wei, 2006). Depending on the characteristics of the time series, we will apply appropriate models such as ARIMA (Autoregressive Sliding Average Model with Differences) (Box, Jenkins, & Reinsel, 1994).

(4) Data Mining: In order to reveal the key themes and cultural elements in the fishing songs, text mining methods from Data Mining: Concepts and Techniques (Han, Kamber, & Pei, 2011) will be used. The book describes the process of text mining, including word segmentation, topic modelling and sentiment analysis.

(5) Optimisation models: the theoretical foundations of mathematical optimisation models are detailed in Linear Programming and Network Flow Problems (Bazaraa, Sherali, & Shetty, 2013). We will develop corresponding optimisation models for optimal resource allocation and decision making.

Finally, we will provide specific data analysis results and model application cases based on the above analysis steps in order to demonstrate the practical application of mathematical modelling methods in the conservation and digital reform of fishing songs in Poyang Lake.

4. Conclusion

Through the mathematical modelling approach of this study, we researched and designed a mathematical model of the fishing song of Poyang. We used tools such as time series analysis, data mining and optimisation models to quantify the efficiency of cultural inheritance and the degree of influence of digital reform, providing theoretical support for the protection and digital reform of fishing songs. This study provides a powerful method and direction for better protection and inheritance of the fishing song culture in Poyang Lake, which helps to protect and inherit this important intangible cultural heritage.

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Research on the Path of College Students' Innovation and Entrepreneurship Education from the Perspective of Digital Economy

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Abstract: This paper discusses the construction strategy of innovation and entrepreneurship education path for college students under the background of digital economy. Firstly, this paper analyzes the characteristics of digital economy and its influence on higher education, and then puts forward four core construction paths for college students' innovation and entrepreneurship education: integrating digital skills and knowledge, promoting practice and innovative thinking, interdisciplinary integration and collaborative learning, and linking industry and academia. Each path discusses the specific implementation and expected effect in detail. The purpose of this study is to provide higher education institutions with effective methods and strategies to cultivate students with innovative spirit and entrepreneurial ability in the era of digital economy.

Keywords: Digital Economy Perspective; College Students; Innovation and Entrepreneurship; Educational Path

Introduction

With the rapid development of digital economy, the global economic structure and enterprise operation mode are undergoing profound changes. Under this background, innovation and entrepreneurship education is facing new challenges and opportunities. In order to adapt to this change, college students' innovation and entrepreneurship education needs to be re-conceived and redesigned. The purpose of this paper is to explore how to construct an effective path of innovation and entrepreneurship education for college students under the framework of digital economy, so as to cultivate innovative talents and entrepreneurs who can meet the future market demand of China.

1. Analysis of the current situation of college students' innovation and entrepreneurship education

First of all, the epidemic has greatly affected the educational environment, during which students' entrepreneurial awareness and ability have also changed significantly. Due to the epidemic, many students began to reconsider their career planning and entrepreneurial aspirations. On the one hand, the uncertain job market has increased students' entrepreneurial interest; On the other hand, the epidemic situation has limited practical opportunities, which poses a challenge for cultivating innovative thinking and practical operation ability. Secondly, in terms of educational content and methods, colleges and universities have made corresponding adjustments. For example, the course content began to involve more topics related to the epidemic, such as crisis management and digital marketing, and also emphasized the cultivation of entrepreneurial spirit and innovative thinking. Practical activities, such as entrepreneurial competitions and simulation projects, are still being carried out through online platforms and virtual environments, although limited by the epidemic. Although the epidemic has brought many challenges, such as resource constraints and the uncertainty of the job market, it has also generated new market demand and technical trends, providing new opportunities for students to start businesses. For example, the rapid development of health science and technology, telecommuting solutions and other fields has opened up a new road for students to start their own businesses.

2.The construction path of innovation and entrepreneurship education for college students from the perspective of digital economy

2.1 Integration of digital skills and knowledge

In the perspective of digital economy, the first step to construct the path of innovation and entrepreneurship education for college students is to integrate digital skills and knowledge. The core of this link is to closely combine the education of digital technology with entrepreneurship education to provide students with the tools and understanding they need to succeed in today's digital-driven business environment.

First of all, the course content needs to cover the basic concepts and applications of digital technology, such as artificial intelligence, big data analysis, blockchain technology and so on. These technologies are gradually becoming the core component of the contemporary business environment, which is crucial to the success of entrepreneurial projects. Through the teaching method of combining theory with practice, students can not only understand the principles behind these technologies, but also learn how to apply them to practical business scenarios. Secondly, in addition to pure technical skills, we should also teach business knowledge related to digital economy, such as digital marketing, e-commerce, network security and data-driven decision-making.

In the era of digital economy, these skills are very important for identifying market opportunities, building business models, managing online customer relationships and protecting enterprises from network threats. In addition, curriculum design should encourage students to practice these skills through project and case study. For example, students can participate in designing market research projects based on data analysis or developing innovative business models based on blockchain. This will enhance their technical ability and lay a solid foundation for students' entrepreneurial journey.

2.2 Promote practice and innovative thinking

Under the background of digital economy, promoting practice and innovative thinking is the key link of college students' innovation and entrepreneurship education. This step focuses on cultivating students' entrepreneurial skills and thinking mode through practical operation and innovative training. First of all, colleges and universities should provide sufficient practice platforms, such as innovation laboratories and business incubators. These platforms not only provide space for students to try and implement entrepreneurial ideas, but also provide necessary resources, including technical support, funds and industry guidance. In such an environment, students can apply what they have learned in class to real business projects, so as to learn and grow in practice. Secondly, colleges and universities should regularly organize competitions or activities related to innovation and entrepreneurship. By participating in these activities, students can exercise their innovative thinking and teamwork ability in a competitive and cooperative environment. For example, a business plan contest or an innovative solution challenge can be held to encourage students to put forward innovative business models or solutions around specific problems or themes, thus helping them broaden their horizons and improve their ability to solve complex problems.

2.3 Interdisciplinary integration and collaborative learning

Under the background of digital economy, interdisciplinary integration and collaborative learning are very important for college students' innovation and entrepreneurship education. This strategy is committed to breaking the boundaries between disciplines and providing students with a comprehensive and diversified learning platform by integrating knowledge and skills in different fields. The setting of interdisciplinary course and the project is the key. These courses should not only cover business and technical knowledge, but also include elements in the fields of design, art and social science. For example, in entrepreneurial projects, students need to combine market analysis, product design and technical realization. Such comprehensive projects aim to cultivate students' ability to think and solve problems from multiple dimensions. On this basis, teachers need to realize that team projects and cooperative homework can encourage students to communicate and cooperate with peers from different disciplines, which not only promotes the understanding of thinking and methods in other disciplines, but also enhances the practical ability of teamwork and problem solving.

2.4 Link industry and academia

Linking industry and academia is a crucial strategy in college students' innovation and entrepreneurship education, especially under the background of digital economy. This link aims to provide students with a practical learning environment closely related to

the industry, and at the same time make academic research better serve the actual business needs. First, establishing school-enterprise cooperation is the key way to achieve this goal. Colleges and universities can provide students with opportunities such as internships, project cooperation and research projects through cooperation with enterprises. This kind of cooperation not only allows students to apply and test their knowledge and skills in the real industry environment, but also helps them understand the industry trends and future trends. Secondly, college teachers can actively invite industry experts and successful entrepreneurs into the classroom to provide lectures and seminars for students, which is another effective way to strengthen this link. These experts can share their own experiences and insights, provide students with valuable industry insights, and also help students build professional networks, which is beneficial to their future career development and entrepreneurial activities .

Conclusion

To sum up, to build a path of innovation and entrepreneurship education for college students under the background of digital economy requires not only innovation in the course content and teaching methods of higher education institutions, but also a deep understanding of the characteristics of digital economy and its impact on the future labor market. By implementing interdisciplinary integrated teaching, strengthening the cultivation of practice and innovative thinking, and establishing close ties between industry and academia, students can be better provided with the necessary skills and knowledge, so that they can become competitive innovators and entrepreneurs in the digital economy era.

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Protection and Reuse of Traditional Village Architecture from the Perspective of live transmission

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Abstract: With the continuous growth of China's social economy, people's demand for spiritual life is increasing. Most of China's land is used to develop real estate and tourist attractions, which involves the protection of some traditional village buildings. Affected by the development of the times and historical factors, it is difficult to carry out the protection and reuse of traditional village buildings. Under the background of rural revitalization, traditional villages have been unable to meet the needs of current social development, and how to transform them into a common concern of rural workers and rural members. Based on this, this paper focuses on the protection and reuse of traditional village buildings, and emphatically analyzes the combination method of active utilization and protection of tradition and the reuse principle of traditional village buildings from the perspective of live transmission.

Keywords: Live Transmission; Traditional Village Architecture; Protection; Recycle

Introduction

The protection of traditional village buildings should be carried out from the perspectives of people, economy and culture, and follow the principles of people-oriented, cultural inheritance and active utilization. However, influenced by the development of the times, the current traditional village buildings are protected and reused. In live transmission's concept, the principle of "people-oriented" is emphasized, which means that when protecting traditional village buildings, the staff should not pay too much attention to the protection and reuse of the buildings themselves, but should pay attention to the protection of "people", because "people" are the users and successors of traditional village buildings, so as to promote the reuse of traditional village buildings. From the perspective of live transmission, the guiding strategy of active participation of actors is mainly divided into four aspects.

1. The staff need to improve the participation system of guides

The guides of traditional village buildings are the local government, which plays a role in promoting and escorting the inheritance and reuse of traditional village buildings. In order to strengthen the implementation effect and progress of the work, local governments need to clearly divide their responsibilities, clarify the division standards of employees in various departments, cultivate professional talents for the protection of traditional village buildings, and formulate a system for the reuse of traditional village buildings. In terms of talent reserve, the local government needs to set up a special research talent with high professional quality, and can give full play to its professional skills in the protection and reuse of traditional village buildings, so as to adapt to local conditions, tap local characteristics, analyze different buildings, formulate targeted development strategies and methods, and implement them to grassroots staff. The staff also need to improve the residents' participation mechanism, because the villagers are the main users of traditional village buildings. In the process of protecting and reusing traditional village buildings, we should fully respect the wishes of the villagers, negotiate with them in a friendly way, and optimize the villagers' participation mechanism from a dynamic perspective. The specific mechanism content can be roughly divided into four types: mutual cooperation, co-construction, co-governance and sharing. The staff also need to enrich the participation methods of the experiencers. The reuse direction of traditional village buildings is mostly local characteristic landscapes, while tourists, as experiencers and consumers, use their participation methods to create a good sightseeing experience for tourists. Rich ways of experience and participation can make tourists immerse themselves in it and feel the

history and art that belong to rural culture alone, thus creating word of mouth and attracting more tourists to visit and spend. Tourists' experience can be roughly divided into four types, namely, aesthetic experience, seclusion experience, play experience and educational experience. Fourthly, the management mode of traditional village buildings has changed, and the participation mode of operators should also be changed. The four common ways of participation are: individual contracting by villagers; Collective management of villagers; Management by foreign business personnel; Government-led operation, etc. Different modes of operation have different advantages and disadvantages. Taking individual contracting of villagers as an example, individual contracting of villagers lacks professionalism, which leads to insufficient management and competitiveness, and often fails to run for a long time. Although the government-led operation is managed by professional management talents, the management mode is too macro, and it is often impossible to estimate the characteristics of villages and adapt to local conditions ^[2].

2. Promote the continuation strategy of traditional village architecture live transmission

There are many intangible cultural heritages in traditional village buildings, and it is precisely because of the cultural characteristics of traditional village buildings that the importance of traditional village buildings is determined. The protection and reuse of traditional village buildings depends on the vitality and sustainable inheritance of the buildings themselves, which is the content that traditional static protection cannot achieve. Nowadays, the state has begun to advocate active protection methods, emphasizing the protection of village buildings that embody our traditional culture, so that these buildings can exert their own vitality and continue. One of the strategies of live transmission, a traditional village building, is to show it alive, which means to turn the immateriality of the village building into "materialization" so that tourists can accurately understand the history, culture and exhibition significance of the traditional village building. If it is not explained, tourists will have a sense of distance from the traditional village building. The specific display method is to introduce the building construction technology, construction process, operation mode of technology and techniques, etc. The display form can be combined with pictures and words. Living protection and live transmission mainly include vivid expression and close contact. Vivid expression refers to a dynamic expression, including theme selection, story setting and activity content setting for traditional village buildings. It is intended to attract tourists to watch through vivid and interesting stories, and let them feel the charm of traditional village buildings and the emotions in the stories. In addition, we can also introduce some ethnic activities, craft techniques, inheritance methods, etc., and attract tourists through dynamic deduction. The display mode of close contact is different from the traditional display mode. Close contact focuses on bringing more vivid viewing experience to tourists, breaking the sense of boundary between traditional village buildings and tourists, and breaking the sense of bondage of tourists, so as to increase the play experience of tourists and increase their deep thinking about traditional village buildings ^[3].

3. The driving strategy to promote the dynamic development of traditional village economy

The active protection and reuse of traditional village buildings must have sufficient innovation ability if they want to develop for a long time, that is, the active economic development brought by traditional village buildings. In traditional villages, traditional industries have declined and can't meet people's needs at present, so we should open up new development methods, such as industrial upgrading and development. In the upgrading of traditional industries, the biggest industrial resources in traditional villages are nothing more than agriculture and handicrafts. However, due to the impact of mechanized work mode, these two industrial resources no longer have industry advantages. Workers need to rely on traditional village buildings to upgrade the agricultural industry, such as the combination of tea culture and traditional village buildings, and the innovative development of handicrafts and traditional village buildings. Tea culture can hold tea tasting activities and art exhibitions, and handicrafts include woven fabrics, local specialties and so on. These distinctive village cultures can be integrated with traditional village buildings, so as to achieve common progress and mutual development. The development of emerging industries mainly caters to the changes of the current market economy. While developing the rural economy, it uses the characteristics of traditional village buildings to develop surrounding industries, including housing improvement, rural film and television bases, and rural practical aesthetic experience space ^[4].

Conclusion

To sum up, on the issue of the protection of traditional village buildings, the traditional working methods tend to be static, that is, they are left alone, only protected and restricted, and not used. This method can only play the role of inheriting historical and cultural information, but it cannot publicize this historical and cultural information. As time goes by, people pay less and less attention to traditional village buildings, and the significance of traditional village buildings no longer exists. Thus, the protection and reuse of traditional village buildings are facing a transformation, and the staff need to give full play to the characteristics of traditional village buildings, constantly update the development model, and explore the working methods from four angles: human needs, cultural live transmission, active utilization of buildings and active economic development.

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Teaching Reform and Practice of Financial Management Course in Application-Oriented Universities in the Era of Big Data

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Abstract: Under the background of the continuous development of science and technology, the era of big data has come in an all-round way, and big data technology has also been widely used in the education industry. The course of financial management in applied colleges and universities is a highly applied course, which focuses on the substance of the course. Teachers need to create a good learning environment for students with the help of information technology, and constantly cultivate students' professional skills and professionalism. In order to improve the quality of financial management courses in colleges and universities, this paper mainly analyzes the management courses in application-oriented colleges and universities, expounds the factors affecting the practical teaching quality of management courses in colleges and universities, and analyzes the teaching methods of management courses in application-oriented colleges and universities. Finally, it is concluded that only when teachers constantly improve their teaching level, can students' learning level be improved by combining theory with practice.

Keywords: The Era of Big Data; Colleges and Universities; Financial Management Course

Introduction

Teaching reform and practice In the process of the continuous reform of China's education system, the social demand for talents has changed. Nowadays, major enterprises are more inclined to recruit applied talents, which has led many colleges and universities in China to change their teaching methods and focus on cultivating students' application ability. After years of practical exploration, teachers of applied financial management have formed a professional teaching system. However, there is still a lot of room for improvement in the background of big data era, and there are still many problems in the course of financial management from the perspective of students' learning quality, which has affected the future development of the major. In order to solve this educational situation, it is necessary for universities and teachers to work together, innovate teachers' educational methods, invest more teaching resources and actively cultivate applied financial management talents.

1. An overview of financial management courses in colleges and universities

With the rapid development of China's social economy, people's demand for entrepreneurship is getting higher and higher, and many new enterprises have sprung up, resulting in an increasing demand for financial management talents. In the major of financial management in colleges and universities, financial management courses mainly include accounting courses, financial management courses and other courses of economic management, which all correspond to the specific positions needed by social enterprises and are important courses for cultivating applied talents. In order to meet the social demand for talents, colleges and universities need to strengthen the training of financial management professionals, focusing on students' comprehensive ability, including students' ability to master theoretical knowledge and practical operation. Therefore, the education system of financial management in colleges and universities needs to make appropriate changes, add practical teaching to the traditional education mode, continuously cultivate students' comprehensive ability and help students become applied talents,.

2.The problems existing in the practical teaching of financial management courses in colleges and universities

2.1 Too much emphasis on theoretical teaching

In the major of financial management in colleges and universities, many teachers still use traditional teaching methods, such as spoon-feeding teaching and indoctrination teaching, etc. These teaching methods are no longer applicable to the current educational form. Teachers talk blindly on stage and students listen in the audience. Too complicated theoretical knowledge will make students feel great learning pressure, and students' learning effect will not achieve the expected effect in the long run. The traditional teaching mode pays too much attention to theoretical teaching, which shows that teachers regard textbooks as the core of education, take cultivating students' memory as the main teaching method, and focus on making students recite knowledge points in a short time, so as to achieve higher academic performance. This educational mode is only superficial, students have not really learned knowledge, students lack time for independent thinking and practical opportunities, and their future development has been seriously hindered.

2.2 Lack of attention to practical teaching

In the teaching of financial management specialty in higher vocational colleges, many teachers lack enough attention to practical teaching. These teachers think that the effect of practical teaching can be achieved by interspersed with some practical cases in theoretical teaching, which is completely wrong. The teaching mode of classroom practice case is planned and organized, so it is difficult for students to learn knowledge in the set practice content, and their understanding of practice teaching is limited, and their ability to find, analyze and solve problems has not been improved.

2.3 Financial management school professional foundation is weak

The professional infrastructure of some colleges and universities is very weak, lacking professional laboratories, and the purchase of professional software is not enough, so students can't learn relevant knowledge comprehensively. Even though there are specialized financial management laboratories in colleges and universities, many laboratories are used to do some accounting simulation work, but they have not carried out financial management practice, and professional laboratories have not played their real role.

In the education of financial management in colleges and universities, teachers should make clear the teaching objectives and arrange the theoretical teaching content reasonably. Because of the influence of traditional educational ideas, many teachers' educational ideas have not changed, which leads to the classroom paying too much attention to theoretical teaching and neglecting practical teaching. Students' general interest in learning is not high, and their acceptance is not high, so their academic performance is naturally getting worse and worse. Clarifying the teaching objectives mainly refers to clarifying what the applied talents trained by financial management in colleges and universities refer to, including the training methods, training processes, theoretical and practical teaching of financial management in colleges and universities, etc. The training method of applied talents mainly refers to the combination of theoretical teaching and practical teaching, in which teachers need to pay attention to the proportion of theoretical teaching in the classroom and properly handle the relationship between theory and practice, so that they can neither abandon theory but pay attention to practice, nor pay too much attention to theory without practice. Theoretical teaching mainly relies on textbooks, which are of great learning significance, but boring theoretical knowledge is difficult to interest students. Only by combining theory with practice can students understand the theoretical meaning in practice. The training process of applied talents is mainly to help students understand the specific definition of financial management and the current situation and future development trend of the industry. Then carry out theoretical teaching, the teaching content should pay attention to gradual progress step by step, and increase the difficulty continuously. After theoretical teaching, carry out practical teaching, so that students can feel the meaning of theoretical knowledge personally and consolidate what they have learned in practice.

2.4 To carry out practical teaching

The practical courses of financial management in colleges and universities are mainly based on ERP sand table, which covers all aspects of enterprise operation, which are of great significance to the development of enterprises. ERP sand table requires students to have the ability of market analysis, strategy formulation, marketing planning and organization production, which are the key factors to determine the future direction of enterprises. Colleges and universities need to actively cooperate with the needs of financial management majors, invest teaching funds to provide students with practice venues and instruments needed for practice, and provide

students with a professional practice environment. In the ERP sandbox, students are like managers of an enterprise, who mainly manage the company's finances. Students should first understand the social development situation and the market trend, then formulate development strategies and directions according to their own company's operation, and learn scientific and reasonable management rules in the ERP sandbox. Students also need to pay attention to cultivating team spirit in practice, so as to improve their overall management ability and help enterprises to produce and develop better. The practice mode of ERP sand table has two advantages. The first advantage is that although ERP sand table is very professional, it also has some game nature. Students can learn about enterprise operation and the specific application of financial management in practice during the game, which can greatly improve students' interest in learning. The second advantage is that students can review theoretical knowledge with the help of ERP sand table in practice, thus deepening the impression of theoretical knowledge in students' minds and helping students complete their studies better,

2.5 Strengthen school-enterprise cooperation

The educational model of school-enterprise cooperation has a long history of development. In the past, the success rate of school-enterprise education was high, and students performed well in enterprise internships, so they can directly enter the enterprise work after graduation. However, the current employment situation is grim, and many students practice in off-campus enterprises only to obtain an internship certificate and then graduate smoothly, which does not really reflect the effect of school-enterprise cooperation. Nowadays, colleges and universities still need to strengthen the educational mode of school-enterprise cooperation, establish cooperative relations with off-campus enterprises for a long time, and treat each other honestly. In the internship stage, off-campus enterprises select interns, provide students with a stable off-campus training base, and carry out an order-based talent training mode. When students perform well and have applied ability, off-campus enterprises need to enroll.

Conclusion

To sum up, with the continuous development of China's education industry, more and more college students graduate every year, and many jobs are saturated, which leads to a severe social employment situation and difficulties for college students. In this case, colleges and universities should cultivate applied talents that meet the needs of social production and development, highlight the characteristics and abilities of talents, and help talents adapt to and understand society more quickly. Therefore, in the major of financial management, schools need to pay attention to the reform and practical research of financial management, increase teaching resources, improve teaching environment, innovate teaching methods, improve teaching quality, and cultivate students into applied talents with high quality and high culture.

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The Motivation Mechanism of Zhizhi Double Assistance in Agricultural Cooperatives under the Herd Effect

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Abstract: In the governance mechanism of how to develop agricultural cooperatives in rural revitalization, incentive mechanisms are the most important part. The village work team mobilizes the supervisory initiative of employees through a good incentive mechanism, combining their goals with the organizational goals, and promoting the development of the team. Based on the theory of herd effect and the motivation mechanism of "Zhizhi Shuangfu", combined with case analysis, this article points out the problems of single incentive form, insufficient attraction of incentive methods, and insufficient skill training for members in the incentive mechanism of YS Agricultural Products Professional Cooperative. In response to these issues, corresponding improvement suggestions were proposed: developing multiple incentive mechanisms, establishing special reward mechanisms, and strengthening technical training for cooperative members.

Keywords: Agricultural Cooperatives; Herd Effect; Zhizhi Shuangfu; Incentive Mechanism

1. Analysis of the current situation of incentive mechanisms

1.1 Current Situation of Incentive Mechanism for Agricultural Cooperatives

The incentive methods that exist in most agricultural cooperatives include incentives for investors, managers, ordinary members, and national policies for the development of agricultural cooperatives.

In agricultural cooperatives, sufficient investment can effectively support the operation of agricultural cooperatives, so it is crucial to provide incentives for investors in agricultural cooperatives. Generally speaking, the incentives for investors in agricultural cooperatives not only depend on the distribution of profits based on the proportion of shares, but also to a certain extent on the quality level of agricultural products and the efforts of management in the agricultural cooperatives. In the context of the proposal of "Zhi Zhi Shuang Fu", a good incentive mechanism is more conducive to unleashing the effectiveness of agricultural cooperatives.

As the leaders of agricultural cooperatives, the management team has important leadership significance. The incentive mechanism for management includes both explicit and implicit aspects. Explicit incentive mechanisms include material incentives such as management compensation, while implicit incentives include notification of praise, participation in training, and issuance of honor certificates.

The incentive mechanism for ordinary members is based on incentives such as public welfare, economic income, and rising market sales. The incentive mechanism for public welfare includes organizing members to purchase large-scale agricultural equipment, helping members grasp market information changes, and promoting disease and pest prevention knowledge to members; Agricultural cooperatives allow members to purchase shares at a discounted price using land, funds, technology, or management related knowledge. Under this mechanism, members can participate in the profit distribution of agricultural cooperatives, greatly increasing their economic income; Members who have participated in agricultural cooperatives can receive guidance from relatively professional personnel within the cooperative, enabling them to obtain better sales of agricultural products. This way, members within the cooperative will be more actively involved in internal affairs of the cooperative.

2. Problems with existing incentive mechanisms

2.1 Personal benefits do not match

From the above description of the current situation, it can be seen that most cooperatives do not provide additional compensation as material incentives for their management personnel and members, but rather provide reputation and spiritual rewards. Management personnel, as important members of the cooperative, have important ties and leading roles, and should attach importance to the incentive mechanism for them. This reward mechanism has a certain effect in the initial stage, but as time goes on, the incentive effect will become less and less, and managers will gradually lose their enthusiasm and initiative in their work. Lack of incentives related to their own interests, managers may lack a sense of responsibility, work passively, and even shirk responsibility. Among the members of the cooperative, some members have outstanding abilities and have a strong leadership role internally. Without effective and lasting material incentives, these members will also lose their initiative. The inaction of management personnel and capable individuals within the cooperative can cause significant obstacles to the development of the cooperative. Because in a cooperative society, managers and capable individuals are like the head of a flock of sheep. Ordinary members will follow their actions to make judgments and make their own decisions.

2.2 Mismatch between manager goals and incentive mechanisms

It is important to align the personal goals of managers with the development goals of cooperatives. When formulating incentive mechanisms, if there are no corresponding goals to drive managers towards the goal of cooperative development, the incentive mechanism will not achieve the corresponding effect. When the goals of the manager are consistent with the goals of the cooperative, it largely serves as a corresponding incentive, and when the manager has clear goals and responsibilities, the manager can better and more actively contribute to the cooperative. In leading the cooperative and playing a leading role, the manager can also lead the members of the cooperative on a path consistent with the development direction of the cooperative.

3. Suggestions for Improving the Incentive Mechanism of Zhizhi Double Assistance

3.1 Improving the Motivation Mechanism for Zhizhi Double Assistance

For members who join agricultural cooperatives, the most effective incentive method at the beginning is to increase economic income. Agricultural cooperatives can consider establishing a fixed salary category, similar to the fixed salary in enterprises. However, the establishment of a fixed salary requires careful consideration. Excessive salary may lead to fatigue among members, making it difficult to stimulate their enthusiasm. Low salary may not serve the purpose of motivating members. On the basis of fixed salaries, agricultural cooperatives can also consider increasing wages, benefits, and benefits, and setting the distribution of benefits and benefits based on the contributions of members to the cooperative. On this basis, it can attract a portion of stable talents to agricultural cooperatives, adding new blood to the cooperatives. The distribution of wages, benefits, and benefits can stimulate the subjective initiative of managers and ordinary members, enabling them to actively explore their potential and make contributions to the cooperative.

3.2 Establish incentive goals for managers

When setting incentive goals for managers, it is necessary to first clarify the development direction and strategic goals of the cooperative, clarify the long-term and short-term goals of the cooperative, and use this as a basis to set managers' goals. The goal should be slightly higher than the ability level of managers, allowing them to explore their potential. And this goal should be quantified as much as possible, with objective criteria for evaluating good or bad.

In addition to setting good goals, a corresponding performance evaluation system should also be established, which should ensure science, fairness, comprehensiveness, and rationality. This can provide certain incentives for members who perform well, and indirectly enhance the 'morale' of managers, thereby enhancing their enthusiasm.

3.3 Strengthen technical training for members

Cooperatives provide intellectual support to members, and provide training at different levels and categories based on their needs.

They can provide on-site training to improve their knowledge and technical level, or invite experts to give lectures to enhance their knowledge and technical level. To carry out professional technical training for members, through agricultural technical training, in order to increase their market awareness, quality awareness, and so on.

From a psychological perspective, meeting the self growth and achievement needs of members, helping them to support their aspirations, and also improving their professional and technical level in the long run, helping them to support their intelligence, thereby achieving the goal of improving their abilities and income, stimulating their enthusiasm, and achieving the goal of motivation. By improving the knowledge, skills, and market awareness of members, the herd effect within the cooperative can be alleviated to a certain extent. After mastering knowledge and technology, members make judgments about the behavior and information of others within the cooperative based on their own knowledge and information. This behavior is a rational thinking behavior, rather than blindly following others. When members are willing to make their own judgments, it is possible to repeatedly correct their decisions and behaviors in order to make the best decisions. This process is conducive to the growth of members' abilities and can promote the long-term development of the cooperative.

3.4 Establish special reward mechanisms

For capable individuals or special talents within agricultural cooperatives, a special reward mechanism can be established separately for them to make significant contributions to agricultural cooperatives or to be distributed when making technological innovations. This mechanism can encourage capable and technical talents within the cooperative to work hard, enabling them to make more contributions to the development of agricultural cooperatives. Based on the herd effect within YS Agricultural Cooperative, when a capable person with a lot of knowledge and technology takes the lead in making efforts, other ordinary members will also be incentivized by this special reward mechanism, like this capable person, in order to continuously develop and improve themselves, and enhance the subjective initiative of ordinary members. On the other hand, such an environment will also promote the development of internal competitiveness of cooperatives, enabling them to continuously progress.

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Strategies for Building a Study Style for College Students from the Perspective of Ideological and Political Education in the New Era

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Abstract: As a group of college students who are about to enter social life and have a certain impact on socio-economic and technological development, their concepts and qualities will have a significant impact on social development. Therefore, in a complex and ever-changing social environment, schools should pay attention to educating college students in aspects such as their values, high moral literacy, and political awareness. Schools can take ideological and political education as the foundation, comprehensively educate students through the construction of a good academic atmosphere, and cultivate them into application-oriented high-quality talents. Based on this, this article mainly studies the construction methods of college students' academic style from the perspective of ideological and political education in the new era.

Keywords: New Era; Ideological and Political Education; College Students; Construction of Academic Atmosphere

Introduction

In the establishment of a long-term development mechanism for schools, the construction of a good academic atmosphere plays an important role in the development of schools. In the construction of academic atmosphere, schools can first clarify the purpose and positive significance of academic atmosphere construction, and then take ideological and political education as the foundation based on the growth characteristics of college students. By leveraging the guiding role of ideological and political education, they can build a good learning and campus living environment for college students, and cultivate their thoughts and concepts. At the same time, in order to ensure the quality of student development, schools should also pay attention to innovation in the way activities are carried out, and continuously optimize the effectiveness of learning style construction through diversified activities.

1. The Positive Significance of Building a Study Style for College Students from the Perspective of Ideological and Political Education

1.1 Guiding significance for the construction of academic atmosphere among college students

Ideological and political education has obvious guiding value for students to form correct values, cultivate good moral character and dialectical thinking. When universities cultivate talents, ideological and political education can be used as the foundation for teaching good books and cultivating good people. The development situation and environment of modern society have obvious complexity characteristics, which have affected the physical and mental health growth and value formation of some college students. For example, although some college students are representatives of the new era, their thinking and problem-solving methods are not novel at all, and they do not possess the vitality of young talents. This is in order to better cultivate energetic young application-oriented talents. In the university teaching stage, we must pay attention to the construction of the style of study, actively play the guiding role of the construction of the style of study in the growth of students, so that students can become New Youth with ideals and aspirations and clear learning goals. At the same time, schools can also use the construction of the academic atmosphere of college students to guide and educate them when they have negative expressions in their thoughts and lives, so that they can overcome

confusion, find future development goals, and strive to achieve them.

1.2 Positive significance for optimizing the achievements of student construction

With the transformation of economic development models, various industries in society have made corresponding adjustments to their talent needs in order to better adapt to the new forms of development. College students, as a new group about to enter society, in order to better meet the needs of social development, it is necessary to clarify what the society needs for talents, and then make more efforts during the university learning stage, in order to have a better future. For example, modern society requires high-quality applied talents with both moral integrity and talent. If college students do not have good moral character and correct values, and only have good professional abilities, or in the opposite case, it is more difficult to find a job that they enjoy and have development. As a factor that can have an impact on students' thoughts and behaviors, the construction of academic atmosphere for college students is based on ideological and political education, guiding and educating students' sense of responsibility and values. This not only improves the effectiveness of academic atmosphere construction, but also has positive significance for improving the quality of education for college students.

2. On the Construction of College Students' Study Style from the Perspective of Ideological and Political Education

2.1 Improving institutional mechanisms and assisting in the construction of academic atmosphere

The system has a good optimization effect on achievements, so in the construction of the academic atmosphere for college students, schools can take students as the center and ideological and political education as the basic construction of the academic atmosphere. In practical construction, schools can establish a two-level management system. The first level management system is mainly aimed at the school, and the second level management system is mainly aimed at the college. This can not only improve the flexibility and pertinence of academic style construction, but also further strengthen the impact of academic style construction on the learning and growth of college students. However, in order to ensure the effectiveness of the system related system settings, schools should be able to take the actual situation as the basis when improving their management systems, so that they can use the system improvement to promote the continuous improvement of the educational value of learning style construction.

For example, when establishing a first level management system in a school, it can mainly focus on the school management level, such as the school government department, Youth League Committee, and Youth League Secretary. These personnel should set a good example. For example, in daily work, to enhance one's attention to academic style management, when problems are found, timely discuss with relevant education personnel, find solutions, and observe the process and summarize experience in the implementation of solutions. Secondly, in the secondary management system, the college can treat the major as a unit, responsible for teachers, counselors, college youth league committees, and other key personnel. On the one hand, these staff members belong to the group who have more contact with students in their daily work and have a better understanding of students' lives and learning. Therefore, when improving the management system related to the construction of academic atmosphere, a management system should be established based on the feedback issues and ideas of these educators, and the improvement of the existing problems will have a good promoting effect on the quality of academic atmosphere construction. On the other hand, in the construction of academic atmosphere, what educators do will also have an impact on students' values and cognition. For example, if there are biases in the teaching of teachers, there may be negative competition among college students in order to gain more preferences, or there may be problems such as not liking professional knowledge. Therefore, as an influential factor in the construction of academic atmosphere, educational personnel should not only attach importance to the implementation of the fundamental task of cultivating morality and talents in institutional construction, but also allow educators in charge of the college to actively think about how to do better in the construction of academic atmosphere, and also make the academic atmosphere have the characteristics of ideological and political education.

2.2 Improving evaluation methods and nurturing a good academic atmosphere

Evaluation can help schools further understand students' behavior and thoughts, which can lay a solid foundation for building a high-quality academic atmosphere. In the past, schools often used student management systems to constrain the behavior of college

students, in order to build a favorable academic atmosphere for their learning and growth. However, due to the changes in teaching requirements and objectives at the current stage, schools should actively innovate their learning style construction methods. Evaluation methods can be used to transform and optimize the learning style, in order to achieve better results.

2.3 Utilize campus practical activities to open the door and build a good academic atmosphere

In campus life during the university stage, in order to enrich students' lives and cultivate them into high-quality talents, the school will carry out clubs, student unions, or other activities with practical characteristics, so that students can grow in practice, learn how to take responsibility actively, and how to achieve unity, friendship, and mutual assistance. Therefore, in the construction of academic atmosphere, schools can link ideological and political education with practical activities, and use time activities to organize and build a study atmosphere with ideological education.

For example, during the construction of academic atmosphere, schools can utilize campus clubs and student union organizations. For example, schools can regularly carry out activities related to ideology and politics, such as requiring student union members to regularly carry out performance activities related to red classics, love for the motherland, and other topics on campus, so that students can promote ideology and politics during performances and build a good academic atmosphere. For example, schools can request the Youth League Committee to organize students from various majors to participate in craft activities in society, showcase their professional talents, serve society and the masses, and enable students to better understand society and have a sense of proactive responsibility.

Conclusion

In summary, when constructing a learning style that is conducive to students' correct worldview, outlook on life, and values, schools should take ideological and political education as the basic entry point, and build with ideological and political education as the core. This can not only provide students with correct guidance in their thoughts and concepts at all times and develop in a healthy direction, but also have positive significance in improving their overall quality. Therefore, universities must attach importance to the construction of academic atmosphere, and use it to promote the achievement of the goal of cultivating morality and talents.

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Discussion on the Cultivation Path of Information Technology Literacy of Kindergarten Teachers in the New Period

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Abstract: With the continuous development of our society, the education community has also put forward a series of new requirements that align with the current era. Among them, in the teaching activities of kindergarten teachers, the effective reference of information technology is conducive to teachers guiding children to participate in learning, helping teachers to create a good teaching environment by means of information technology, and helping to expand children's vision and develop children's intelligence. However, at present, some kindergarten teachers in our country do not have information technology literacy, which hinders the growth of children. Therefore, this paper focuses on the cultivation of information technology literacy among kindergarten teachers in the new era.

Keywords: Kindergarten; Teacher; Information Technology Literacy; Training Path

Introduction

With the rapid development of modern information technology, there is an increasing focus on the application of educational information technology in teaching. Enhancing the information technology literacy of kindergarten teachers is crucial for improving the quality of early childhood education and promoting children's overall growth. Therefore, it is imperative for kindergartens to cultivate teachers' information technology literacy, which can be started from creating a good teaching environment for teachers and paying attention to the cultivation of teachers' information technology literacy. Therefore, this article from the kindergarten teachers' information technology literacy and its cultivation of two aspects to start a simple exposition.

1. Significance of cultivating kindergarten teachers' information technology literacy

In recent years, China's Ministry of Education has put forward the Guidelines for Kindergarten Education, which points out that "Science education for children is scientific enlightenment education, focusing on stimulating children's interest in knowledge and desire for inquiry." This requires kindergartens to cultivate teachers' information technology literacy to facilitate teachers in the process of education and teaching so that children can feel the happiness of learning in the process of learning and exploration. The cultivation of kindergarten teachers' information technology literacy can effectively improve their educational ability of information enlightenment, so as to lay a solid foundation for children's learning career. Therefore, kindergarten teachers need to improve their information technology ability and cultivate their information technology literacy through various methods, so as to improve their information education level and ultimately achieve the overall development of children^[1].

All in all, the ultimate goal of cultivating kindergarten teachers' information technology literacy is to enable children to grow up better, faster and healthier, and help them grow into new talents who meet the needs of the new era.

2. Training paths of kindergarten teachers' information technology literacy

2.1 Kindergarten teachers should pay more attention to information technology education

When cultivating kindergarten teachers' information technology literacy, it is necessary to improve the kindergarten teachers' attention to information technology education. Because this can fully stimulate the enthusiasm of teachers to cultivate information technology literacy, so that they can independently cultivate information technology literacy through learning, training and other ways. First of all, kindergartens need to popularize the importance of information technology literacy, so as to promote teachers to update their teaching concepts. For example, kindergartens can make full use of Spaces such as blank walls and publicity boards in the garden to post posters and papers on the importance of teachers' information technology literacy. So that teachers can often see such information in daily teaching activities, over time, to a certain extent, can promote teachers to study how to develop information technology literacy. Secondly, kindergartens need to provide good conditions for teachers to develop information technology literacy. For example, kindergartens cooperate with colleges and universities to invite professionals to the kindergarten to carry out relevant lectures and training meetings, so as to improve kindergarten teachers' awareness of information technology literacy, so as to enhance their attention to information technology literacy. Finally, kindergartens can also add assessment provisions on information technology literacy to teachers' assessment, and use relevant assessment to urge teachers to cultivate their own information technology literacy. This not only enables teachers to pay attention to the cultivation of their own information technology literacy, but also innovates education and teaching methods according to information technology literacy, highlights the dominant position of children in the classroom, and ultimately improves the teaching effect [2].

2.2 Create a good learning environment

Kindergarten to create a good information education environment, can start from the following aspects. First of all, kindergartens can build information-based education and teaching platforms, and kindergartens with poor basic conditions can apply for financial assistance from the local government to build teaching platforms. After the information-based education and teaching platform is built, the government takes the lead to guide all kindergartens to share educational resources, so as to balance educational resources. For kindergartens with poor conditions, the government can also build a relationship of assistance with kindergartens with better conditions, and carry out diversified teaching activities through kindergartens with better conditions, so that kindergartens with poor conditions can develop rapidly. Secondly, kindergartens need to pay attention to the cultivation of teachers' information technology literacy, and improve the relevant training system. For example, to optimize the curriculum of information technology, teachers are required to pay attention to practical courses when carrying out theoretical knowledge teaching activities, and advocate both practice and theory courses in parallel. In addition, kindergartens can also allow teachers to use multimedia technology to carry out teaching activities and improve teachers' information technology literacy through practical operation. Finally, kindergartens can also appropriately carry out information technology-related activities, such as information technology curriculum design competition, information practice teaching activities.

For example, when kindergarten teachers carry out the course of "losing the handkerchief", they can first use information technology to find relevant video materials before class and make PPT courseware to carry out relevant teaching activities. Teachers should also prepare several handkerchiefs to carry out follow-up practical teaching activities. Secondly, when teachers carry out teaching activities, they use PPT courseware to show children the song video of "throwing the handkerchief" to stimulate their interest in "throwing the handkerchief". Finally, the teacher led the students to leave the classroom to the outdoor activity area, and organized the students to carry out the game activities of throwing handkerchiefs. In this way, teachers can not only improve their use of information technology through practical operation, but also integrate this technology into teaching activities. For children, they can not only experience a more intuitive learning environment created by teachers through information technology, but also promote the comprehensive development of their abilities through practical activities.

2.3 Improve the training mechanism

Kindergarten can improve the information technology training mechanism to promote teachers to develop information technology

literacy. First, kindergartens can develop a series of training plans. For example, starting from the actual situation of kindergarten teachers, corresponding training activities are formulated according to the characteristics of teachers themselves. Secondly, kindergartens need to develop assessment, incentive and evaluation systems to ensure the quality of teachers' teaching activities, provide help for the cultivation of teachers' information technology literacy, and fully mobilize teachers' enthusiasm for designing information technology education and teaching activities. Finally, the kindergarten also needs to create an online and offline platform for teachers to communicate, so that teachers can cooperate in exploring the information technology education and teaching mode, so as to accumulate teachers' teaching experience and ultimately improve their own information technology literacy ^[3].

Specifically, kindergartens can develop a teaching assessment system, such as how many times a week the teacher uses information technology to carry out teaching activities and how many times a week the teacher carries out practical teaching activities, all of which need to be recorded in the teaching plan, and a teaching inspection team is set up to listen to the lesson and evaluate, check and verify the teaching plan. According to the incentive system, the kindergarten will reward the teachers materially or spiritually, and punish the teachers with poor teaching performance. In addition, the application of evaluation system can be reflected in three aspects: children's evaluation of teachers, parents' evaluation of teachers and colleagues' evaluation of teachers. Through multiple evaluations, the kindergarten can fully understand and recognize the advantages or disadvantages of a certain teacher, so as to facilitate the kindergarten to conduct further targeted training for the advantages and disadvantages of these teachers ^[4].

2.4 Enrich information technology training

In the process of information technology training for kindergarten teachers, it is not only necessary to pay attention to the basic characteristics of early childhood education, but also to carry out relevant innovations in teacher information technology training, so as to effectively improve teachers' information technology literacy. For example, kindergartens attach importance to training teachers in the ability to acquire information, analyze information, process and process information, and ensure that they can use information technology in daily education and teaching activities. In addition, kindergartens also need to expand the use of information technology by teachers, because The Times are always moving forward, and teachers need to keep pace with The Times ^[5]. For example, kindergartens can organize teachers to use online platforms to communicate with college professionals and participate in research and training activities, so that teachers can develop information technology literacy faster. Finally, kindergartens can also adopt the education model of "replacing the inferior with the superior", "exchanging the old for the new", and "bringing the old with the new" to carry out information-based teaching activities, so as to enrich the information-based teaching activities in kindergartens and improve the information-based teaching process.

Conclusion

To sum up, the cultivation of information technology literacy of kindergarten teachers in China can affect the development level of early childhood education to a certain extent. The information education and teaching need kindergartens to attach great importance to IT, and start from four aspects: improving kindergarten teachers' attention to information technology education, creating a good learning environment, improving training mechanism and enriching information technology training. In order to cultivate teachers' information technology literacy, make them renew their education and teaching concepts, innovate education and teaching methods, and put them into practical teaching work, finally promote children's all-round development and lay a good foundation for their future learning career.

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Research on Professional Development and Training Paths of Teachers in Public Kindergartens

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Abstract: A professional team of kindergarten teachers can guarantee the high-quality development of preschool education. In the process of professional development of kindergarten teachers, their professional development in different dimensions can usually be manifested in educational practice, which is related to the quality of kindergarten education and the development of children. Therefore, this paper first analyzes the current situation of the professional development of teachers in public kindergartens, points out the problems existing in the professional development of teachers, and hopes to promote kindergarten teachers to continuously improve their professional abilities and realize the sustainable development of the education team by exploring the path of professional development and training of teachers.

Keywords: Public Kindergarten; Teacher; Professional Development

Introduction

With the continuous deepening of the reform of preschool education, the quality of preschool education has gradually become a hot topic. As the specific planner and guide of kindergarten education practice activities, kindergarten teachers are an important part of promoting the development of early childhood education and a key breakthrough to promote the professional development of teachers [1]. Although the development of preschool education in China has made obvious progress, the team of kindergarten teachers is also growing, and the quality of education has been significantly improved than before, but there are still some practical problems in the construction of kindergarten teachers, therefore, focusing on high-quality teachers and promoting the professional quality of kindergarten teachers can better promote the overall quality of preschool education.

1. Current status of professional development of teachers in public kindergartens

First of all, there are some differences in the professional knowledge and ability of kindergarten teachers with different teaching age. In terms of professional knowledge reserve, on the whole, it can be found that the older the teacher, the richer the knowledge reserve, and the vice versa, which means that the professional knowledge reserve of kindergarten teachers is closely related to their teaching experience. However, this phenomenon is not absolute, some older teachers due to the slow pace of knowledge update, in the specific practice of the younger teachers are less easily accepted by children, therefore, teachers accumulate professional knowledge, but also pay attention to the update of knowledge. In terms of the level of professional ability development, the longer the teacher's teaching experience, the higher the level of professional ability development. Secondly, for kindergarten teachers with different professional titles, the concept of teacher ethics will be different. With the gradual improvement of professional titles, there are obvious differences between teachers with higher professional titles and those without professional titles. It is worth noting that professional development support and career planning affect the professional development level of kindergarten teachers, and the former two are in direct proportion to the latter, that is, the higher the level of the former two, the higher the professional development level of kindergarten teachers [2].

2. Problems in the professional development of teachers in public kindergartens

2.1 There are deviations in the professional concept of kindergarten teachers

In terms of professional concept and teacher ethics, most teachers in public kindergartens attach great importance to this, but there are still a few teachers who do not realize that preschool education is the most enlightening and basic stage in the entire education process of students, so they do not have a deep understanding of professional concept. Take the professional development of 120 teachers in a public kindergarten as an example. It can be found that the number of qualified teachers with professional concepts only accounts for 20.83%, as shown in Table 1. The professional concept requires kindergarten teachers to have a deep understanding of the occupation and the attitude and behavior of early childhood education. Usually, these teachers have a deep understanding of the occupation and can care for children in teaching work, but there are still some deviations in the childcare of children. Most teachers have a certain professional quality and can focus on children, but in the specific observation, a few teachers have a certain bias towards children, and their cognition of professional concepts needs to be improved.

Table 1 Descriptive statistics of professional development of teachers in a public kindergarten

	Number of qualified teachers	Mean value	Standard deviation	Take up a proportion of
Different dimensions	25	38.156	1.074	20.83 %
Professional concept	25	2.682	0.131	20.83 %
Professional knowledge	23	2.644	0.156	19.17 %
Professional competence	25	2.692	0.082	20.83 %

2.2 Kindergartens lack training for teachers in professional fields

At present, the comprehensive curriculum reform of public kindergartens advocates the wholism of children's learning, requiring teachers to set basic themes combined with experience in relevant fields and conduct in-depth exploration according to the set themes, so as to help children obtain complete and beneficial experience^[3]. In order to adapt to the current reform trend of preschool education, kindergartens must change the traditional teaching methods and explore new teaching methods to replace the previous fixed subject teaching, but the professional training of teachers in the corresponding field has been neglected. Although the wholeness of early childhood learning is in line with the characteristics of early childhood development, the existing training should also pay attention to the development of teachers in related fields, so as to enhance teachers' understanding of early childhood learning and development, and thus provide children with a complete experience.

2.3 Teacher professional planning is unclear and lacks institutional guarantee

Studies have shown that kindergarten teachers usually lack professional development planning and awareness, and cannot clearly understand the characteristics of professional development at each stage. Some kindergarten teachers even lack a positive enterprising spirit due to the lack of room for personal advancement, complicated work affairs in kindergartens or family factors, and choose to follow a step-by-step approach instead of seeking positive professional development. In addition, in terms of the guarantee system for professional development, most kindergarten teachers believe that the salary, reward mechanism and management system are in urgent need of improvement. Through the investigation, it is found that the professional development of kindergarten teachers lacks relatively perfect system guarantee in terms of treatment, reward or management.

3. Professional development and training paths for public kindergarten teachers

3.1 Improve the professional understanding of kindergarten teachers

Because some kindergarten teachers do not have a deep understanding of professional concepts, the development of professional concepts among teachers is unbalanced. In this regard, kindergarten teachers should pay attention to accumulate teaching experience in specific educational practice activities, carry out in-depth understanding and implementation in the four aspects of professional understanding, attitude and behavior toward children, early childhood care and education and personal cultivation, so as to strengthen

their own professional understanding, effectively penetrate professional concepts into educational practice, and promote the perfection of their own knowledge system. Be able to treat children with an objective and fair attitude ^[4]. In addition, kindergarten teachers should also pay attention to teaching reflection in order to promote self-professional development.

3.2 Attach importance to the training of kindergarten teachers' professional literacy

In view of the holistic learning of children, the professional training of teachers in kindergartens should pay attention to the diversification of content, be in line with the reality, and meet the different needs of the professional development of kindergarten teachers. Through hierarchical training, the training of teachers' artistic skills, the design and guidance of children's activities and the organization of children's daily life are strengthened. In the form of training, we should pay attention to the effective and diversified interaction of training forms, and create a professional development environment for teachers' cooperation through watching and listening to lectures, participating in competitions, teaching and research projects. Some scholars have emphasized that kindergartens should attach importance to the professional development training of the whole team of teachers through practical and effective training modes: taking the construction of educational theories as the guidance, subject research as the key content, concrete practical activities as the carrier, and carrying out practical professional training through observation and investigation ^[5]. For new teachers who are just teaching, they can carry out targeted learning through various ways, such as teaching new teachers, watching and listening to lectures, exchange of experience and post practice.

3.3 Develop professional plans for teachers and provide institutional guarantees

In view of the unbalanced development of kindergarten teachers' professional concepts and professional abilities, it is very important for teachers to make professional plans for themselves. Of course, teachers should objectively look at their own actual situation, take the Professional Standards for Kindergarten Teachers as a specific reference, and analyze their own strengths and weaknesses in detail, so as to stimulate their own internal motivation, design scientific and reasonable professional development plans for themselves, and promote their continuous growth according to the goals proposed at different stages. At the same time, teachers should also establish professional ideals, consciously carry out their own professional development under this premise, actively carry out child care and education activities through innovative teaching methods, exchange teaching experience with colleagues, and achieve their own professional development goals. In addition, in order to enhance the confidence of kindergarten teachers in professional development, kindergartens should strengthen the institutional guarantee and resource investment. With the support of improving the institutional system, kindergarten teachers can maintain their enthusiasm for preschool education and further improve their professional development level.

4. Closing remarks

All in all, the professional development of kindergarten teachers is not a process of stage and short-term development, but a process of long-term accumulation, which requires teachers to have the awareness of active development, constantly strengthen their professional cognition, and formulate professional development plans for themselves through participating in various targeted professional training, so as to achieve self-development. Only with a clear understanding of their own positioning and development planning can they clarify the direction and path of development, so as to promote the sustainable development of preschool education.

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Innovative Research on Teaching Design and Development of Courses Based on Digital Platforms

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Abstract: The purpose of this paper is to discuss the innovative research on the instructional design and development of courses based on digital platforms. Firstly, the importance of digital platforms in the field of education and the current status of their application are introduced. Secondly, the concepts and key elements of course instructional design and development are analysed, and the role of digital platforms in course instructional design and development is discussed. Then, the innovative practices and methods of course instructional design and development based on digital platforms are described, including the integration and personalised customisation of learning resources, the construction and interactive communication of learning communities, and the improvement of evaluation and feedback.

Keywords: Digital Platforms; Course Instructional Design; Development of Innovations

Introduction

The popularity and development of digital platforms have revolutionised education and teaching. Digital platforms not only provide rich learning resources and tools, but also provide teachers and students with more flexible and personalised teaching and learning modes. Therefore, it is of great practical significance to study the innovation of teaching design and development of courses based on digital platforms. The aim of this study is to explore the innovative methods of course instructional design and development based on digital platforms, and to analyse their impact and significance on education and teaching. Through literature review and empirical research, as well as the method of case study, the application of digital platforms in course instructional design and development is studied and explored.

1. Concepts and elements of curriculum instructional design and development

1.1 Definition of curriculum design

Curriculum design refers to the process of designing a set of organised, structured and targeted education and teaching programmes in education and teaching activities by integrating teaching resources and teaching methods according to teaching objectives and students' needs. It is a systematic and comprehensive task, including the setting of curriculum objectives, the selection and organisation of teaching content, the design and application of teaching methods, and the preparation and selection of teaching materials.

1.2 Elements and steps in curriculum design

1.2.1 Elements of curriculum design

First, teaching objectives: clear teaching objectives are the first task of curriculum design. Teaching objectives should be specific and clear, including knowledge objectives, skill objectives and emotional objectives. The setting of teaching objectives should be based on the subject education

Secondly, teaching content: according to the teaching objectives, select and organise appropriate teaching content. Teaching content should include the necessary basic knowledge and skills, as well as expanded and extended content, so that students can

gradually master and apply what they have learnt.

Third, Teaching Methods: according to the teaching objectives and the characteristics of the students, to choose the appropriate teaching methods. Teaching methods should not only focus on teacher-student interaction, stimulate students' initiative, but also focus on cultivating students' spirit of cooperation and innovation.

Fourth, Teaching evaluation: Establish a reasonable teaching evaluation system to assess students' learning. Teaching evaluation should focus on the evaluation of students' comprehensive quality, including both the assessment of knowledge and skills and the cultivation of students' emotional attitudes and values.

1.2.2 Steps in course design

First, analysing needs: this includes analyses of the educational objectives of the subject, the characteristics of the students and the needs of the society, which provide a basis for the setting of teaching objectives.

Secondly, setting teaching objectives: clarifying teaching objectives, including those of knowledge, skills and emotions.

Thirdly, selection of teaching materials and teaching resources: selecting appropriate teaching materials and teaching resources to support the achievement of teaching and learning objectives.

Fourth, designing teaching activities: according to the teaching objectives and teaching materials, designing teaching activities, including the choice of teaching methods and classroom organisation.

Fifth, implementation and evaluation: according to the teaching design, organise and implement teaching activities, and carry out evaluation to understand students' learning and teaching effectiveness.

2. The role of digital platforms in the pedagogical design and development of courses

2.1 Provision of rich learning resources

Digital platforms provide rich and diverse learning resources for curriculum teaching design and development. Teachers can access a variety of online teaching materials, learning videos, e-books and other resources through the digital platform, which not only enrich the teaching content, but also make learning more vivid and interesting. In addition, the digital platform can also provide students with personalised learning resources to meet the learning needs and interests of different students.

2.2 Provide flexible teaching and learning modes

Digital platforms provide flexible and diverse teaching and learning modes for the design and development of course teaching. Teachers can offer online courses and implement distance learning through online teaching platforms, presenting teaching content and learning resources in a variety of forms, increasing students' learning modes and learning opportunities. At the same time, students can also carry out independent learning, interactive exchanges and group cooperation through the digital platform, which improves the flexibility and interactivity of teaching.

2.3 Supporting personalised learning and differentiated instruction

The application of digital platforms can support personalised learning and differentiated teaching. Teachers can implement personalised teaching by tailoring learning plans and resources for students according to their different learning levels, interests and learning styles. Through the learning management system of the digital platform, teachers can also monitor and assess students' learning situation and progress in real time, and make timely adjustments to teaching strategies to better meet students' learning needs.

2.4 Provide real-time evaluation and feedback

The digital platform can also provide a real-time evaluation and feedback mechanism in course teaching design and development. Teachers can assess students' learning in real time through online quizzes and homework submissions, identify students' learning problems and difficulties in a timely manner, and provide targeted guidance and support. In addition, students can also get instant feedback and evaluation from teachers through the digital platform, which promotes students' learning reflection and progress.

3. Innovative Practices and Methods of Teaching Design and Development of Courses Based on Digital Platforms

3.1 Integration and personalisation of learning resources

3.1.1 Development and application of intelligent learning resources

Using digital platforms, intelligent learning resources can be developed and applied to provide students with more flexible and personalised learning experiences. Intelligent learning resources can tailor-make learning content and learning paths for students according to their learning background, learning interests and learning progress. In this way, students can choose learning resources that suit them according to their own characteristics and needs, and improve their learning effectiveness. For example, some online learning platforms can recommend learning materials, courses and practice topics suitable for students according to their learning situation. Meanwhile, intelligent learning resources can also provide personalised learning counselling and feedback through data analysis and artificial intelligence technology. Students can adjust their learning strategies and improve their learning results based on their learning situation and feedback results.

3.1.2 Personalisation and adaptive evaluation of learning resources

Digital platforms offer more possibilities for personalised customisation of learning resources and adaptive assessment. Teachers can select and customise learning resources suitable for students according to their learning characteristics and needs. For example, taking the online learning platform as an example, after registering and logging into the system, students can select courses suitable for them according to their interests and learning objectives. The system will recommend suitable learning resources and activities for students based on their course selection records and learning performance. Students can choose their own learning resources and make use of the functions provided by the platform to study. During the learning process, the system will give real-time learning feedback and suggestions based on students' learning data. Meanwhile, students can also use the system's search function to select learning resources and learning communities that suit their learning needs. Through personalisation and adaptive assessment, students can learn more effectively and improve their learning outcomes.

3.2 Learning community building and interactive communication

3.2.1 Construction and operation of blended learning communities

A blended learning community is a combination of online and offline learning communities that use digital platforms to provide learners with diverse learning and collaboration environments.

First, online discussion and cooperation: through the online discussion function of the digital platform, a communication platform between learners is built. Learners can raise questions, share their views and engage in discussions and cooperation with other learners in the course, in order to promote mutual understanding and knowledge-sharing among learners.

Second, group cooperation and project practice: using the collaboration tools of digital platforms, learners are divided into groups and given the opportunity to work together to complete project tasks. Through online collaboration, learners can work together to solve problems and complete tasks, thereby enhancing their ability to cooperate and innovate.

3.2.2 Collaboration and interaction in online learning communities

An online learning community is a learning community that is built and operated online, based on a digital platform. Collaboration and interaction in online learning communities can take the following approaches:

First, online discussion and feedback: using the discussion boards or social functions of digital platforms, learners can engage in instant discussion and interaction. Teachers can raise questions, guide learners to participate in discussions, and give timely feedback and guidance to promote in-depth thinking and communication among students.

Second, virtual experimentation and simulation: through the virtual laboratory or simulation software provided by the digital platform, learners can conduct experiments and simulation operations, observe and analyse the results of experiments, and communicate and share them with other learners. This virtual experimentation and simulation can provide a safer and more economical experimental environment, and at the same time facilitate interaction and sharing among learners.

Third, online counselling and mutual assistance: learners can ask teachers questions and seek help and solve problems through the

online counselling function of the digital platform. At the same time, learners can also help each other, share their learning experience and problem-solving methods, and promote mutual assistance and interaction among learners.

3.3 Improvements in evaluation and feedback

3.3.1 Evaluation methods and tools based on digital platforms

Some commonly used evaluation methods and tools based on digital platforms include:

First, automated assessment: automated assessment tools on digital platforms allow for a quick and accurate assessment of students' knowledge acquisition. These tools can automatically generate scores and feedback based on students' answers to questions, helping students to keep abreast of their learning achievements and shortcomings.

Second, online questionnaires: the digital platform allows for easy access to online questionnaires to collect students' feedback and opinions on course teaching. By analysing the results of the questionnaires, teachers can learn about students' satisfaction, understanding and learning needs of teaching activities, so that they can make improvements and adjustments accordingly.

Thirdly, multimedia evaluation: the digital platform provides the function of displaying and evaluating multimedia materials, so that teachers can evaluate students' expression, creativity and co-operation through their works, displays, demonstrations and other multimedia forms. This kind of evaluation is more intuitive and concrete, and can stimulate students' learning interest and motivation.

3.3.2 Individualised feedback and demonstration of learning outcomes

The digital platform provides a convenient way for personalised feedback and demonstration of learning outcomes. Through the digital platform, teachers can quickly access students' learning data and achievements, provide personalised feedback and guidance based on students' individual differences, and help students identify their strengths and weaknesses, and formulate corresponding learning strategies and plans.

In addition, the digital platform can also provide a platform to showcase students' learning outcomes. Students can demonstrate their learning outcomes and thinking by uploading their works, posting blogs and participating in online discussions. This can not only enhance students' self-confidence, but also stimulate their learning motivation and creativity.

4. Summary

The instructional design and development of courses based on digital platforms is an endeavour with great potential and room for innovation. Through the rational use of digital technologies and platforms, the teaching effect and learning experience can be enhanced, and the personalised learning and independent development of students can be promoted. However, it is also necessary to pay attention to issues such as the selection and use of platforms, safeguarding students' privacy and information security, as well as promoting interaction and co-operation between teachers and students in the course of practice. Therefore, future research and practice need to continue to explore and improve in depth to better meet the needs of students and teachers and to promote innovation and development in education.

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A Contingency Table Analysis of the Support of Song Rhyme Culture Under the Influence of Multiple Factors

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Abstract: Under the interactive influence of multiple factors, there are significant differences in the support of citizens for Hangzhou's Song rhyme culture. Therefore, in this section, we will consider factors such as repetition and similarity in nature, and investigate the correlation between age and the support of Song rhyme culture.

Keyword: Age; Song Rhyme Culture; Support Level; Contingency Table Analysis

Introduction

Culture is the unique feature and charm of a city that sets it apart from other cities. It is the soft power of a city and an endless source of promoting the sustainable development of hard power. The elegant and exquisite "Song rhyme culture" is the unique flesh and soul of Hangzhou. It is rich in connotation and broad in extension. It gathers the essence of the two Song cultures. It is an important part of China's excellent traditional culture, and is also the key to Hangzhou's glow in the long history. As an ancient capital of the Southern Song Dynasty, Hangzhou possesses unique cultural resources of the Song Dynasty, and deserves the responsibility of inheriting and promoting the Song Dynasty culture. Therefore, in order to better understand the understanding of Hangzhou citizens towards the development of Song rhyme culture and the current situation of Song rhyme culture related activities, this article studies the support of Song rhyme culture under multiple factors.

1. A Table of the Relationship between Age Structure and the Support of Song Rhyme Culture

In this survey, we divided the age into five age groups: under 18 years old, 18-25 years old, 26-35 years old, 36-55 years old, and over 55 years old. Explore whether there are differences in support for Song rhyme culture among different age groups. The statistical results are shown in the table below.

Table1: Relationship between Age Structure and the Support of Song Rhyme Culture

			Support				total
			very supportive	Relatively supportive	remain neutral	Not Supported	
age	Under 18 years old	count	72	32	10	0	114
		Proportion of rows	63.2%	28.1%	8.8%	0.0%	100.0%
	18-25 years old	count	118	102	34	0	254
		Proportion of rows	46.5%	40.2%	13.4%	0.0%	100.0%
	26-35	count	71	97	25	3	196

	years old	Proportion of rows	36.2%	49.5%	12.8%	1.5%	100.0%
	36-55 years old	count	53	44	7	1	105
		Proportion of rows	50.5%	41.9%	6.7%	1.0%	100.0%
	Over 56 years old	count	7	3	1	0	11
		Proportion of rows	63.6%	27.3%	9.1%	0.0%	100.0%
total		count	321	278	77	4	680
		Proportion of rows	47.2%	40.9%	11.3%	0.6%	100.0%

Pearson chi square test p-value: 0.003

2. Result Analysis of Age Structure and Song Rhyme Culture Support

According to the chi square test, the value is less than 0.05, so the original hypothesis is rejected. The conclusion is that there are differences in the views of different age structures on the support of Song rhyme culture. The population under 25 years old and the population over 36 years old generally hold a supportive attitude towards Song Yun culture, but the proportion of people aged 26 to 35 supporting the development of Song Yun culture in Hangzhou is relatively low. This may be because citizens aged 25 and above have a high level of participation in the rise of Song rhyme culture in recent years, and do not yet need to take on family and social responsibilities. They have more energy to participate in various Song rhyme culture related activities. Some schools in Hangzhou also require young people to learn about Song rhyme culture to enrich their spiritual world, Therefore, the population of this age group has a high level of support for the development of Song rhyme culture. For people over the age of 36, their career prospects are mostly clear and relatively stable compared to young people who have just graduated. Therefore, they begin to pay more attention to their spiritual needs and use Song Yun to fill the void in their unchanging lives. For people aged 26 to 35, they face greater life pressure and need to weigh things more from the perspective of interests. Therefore, it is difficult to have leisure time to appreciate the profound and profound Song culture and carefully appreciate its connotations.

3. A Table of the Relationship between Cultural Level Structure and the Support for the Development of Song Rhyme Culture

People of different cultural levels have different levels of acceptance and learning abilities, resulting in varying degrees of acceptance of Song rhyme culture, and their understanding of the connotation of Song rhyme culture is also different. Therefore, the cultural level structure may have an impact on the support of Song rhyme culture. We roughly divided the cultural level of the population into five parts: junior high school and below, high school and technical secondary school, junior college, undergraduate, and master's degree students and above. The results are as follows:

Table 2: Cultural Level Structure and Song Rhyme Cultural Support

			Support				total
			very supportive	Relatively supportive	remain neutral	Not Supported	
Education level	Junior high school and below	count	52	18	6	0	76
		Proportion of rows	68.4%	23.7%	7.9%	0.0%	100.0%
	High school and	count	38	18	6	0	62
		Proportion	61.3%	29.0%	9.7%	0.0%	100.0%

	technical secondary school	of rows					
	junior college	count	32	35	18	1	86
		Proportion of rows	37.2%	40.7%	20.9%	1.2%	100.0%
	degree	count	159	145	38	0	342
		Proportion of rows	46.5%	42.4%	11.1%	0.0%	100.0%
	Master's degree or above	count	40	62	9	3	114
		Proportion of rows	35.1%	54.4%	7.9%	2.6%	100.0%
total		count	count	278	77	4	680
		Proportion of rows	Proportion of rows	40.9%	11.3%	0.6%	100.0%

Pearson chi square test p-value:<0.001

4. Analysis of the Results of Cultural Level Structure and Support for the Development of Song Rhyme Culture

According to the chi square test, the value is less than 0.05, so the original hypothesis is rejected. The conclusion is that there are differences in the views of cultural level structure on the support for the development of Song rhyme culture, and there is a correlation. According to the above table, we can see that the proportion of highly supported and relatively supported individuals with cultural levels below high school and technical secondary school is the highest. This may be because middle school students have more leisure time to learn about Song Yun culture, and now Hangzhou vigorously promotes Song Yun culture. Many schools have organized corresponding cultural activities, which helps students deepen their understanding of Song Yun culture in entertainment. The population that does not support the development of Song rhyme culture is concentrated in master's students and above. This may be because master's students have a higher level of education and a more sharp perspective on culture. Currently, most of the Song rhyme cultural activities carried out in Hangzhou are of a popular science nature among young people, and the forms provided are relatively simple, making it difficult to provide a good experience for master's students and above.

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Mixed Teaching Reform of Online and Offline in Applied Undergraduate Colleges —— A Case Study of Electrical and Electronic Practice Course

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Abstract: Experimental teaching is an efficient way of education, through practical operation and experimental activities to help students deeply understand theoretical knowledge, cultivate practical ability and solve practical problems. As an important engineering practice course, "Electrical and Electronic practice" has a special status and function in application-oriented undergraduate colleges. In the face of the rapid development of science and technology, the way of education must be innovated constantly. In this paper, a combination of Online and offline teaching reform is carried out for the Course "Electrical and Electronic Practice" offered by application-oriented undergraduate colleges. SPOC (Small Private Online Course) is established on the basis of MOOC, which combines online and offline teaching to promote the all-round development of students. It cultivates their practical ability and competitiveness, and lays a solid foundation for their future career and academic path.

Keywords: MOOC; SPOC; Blended Education Reform

Introduction

Application-oriented undergraduate colleges are a kind of higher education institutions, which mainly aim at cultivating application-oriented talents. Colleges and universities pay attention to the cultivation of students' practical ability, and are committed to enabling students to flexibly use their knowledge and skills in practical work. The educational methods of colleges and universities emphasize experimental teaching, consolidating theoretical knowledge through practical operation and experimental activities, and cultivating students' practical application ability and the ability to solve real world problems. Experimental teaching is an efficient way of education, which helps students to deeply understand theoretical knowledge, cultivate practical ability and solve practical problems through practical operation and experimental activities. It not only helps students transform abstract theoretical knowledge into practical skills, but also stimulates their innovative thinking and problem-solving ability. In the face of the rapid development of science and technology, education methods must also be constantly innovative. Although online teaching provides convenience in some aspects, it is difficult for pure online teaching to meet the needs of students for courses such as "Electrical and Electronic Practice", which requires practical operation and experiments. The interaction between hands-on and experimental sites is essential for a deep understanding of learning, which cannot be completely replaced. Therefore, applied undergraduate colleges and universities need to constantly explore innovative educational models that combine online and offline resources to provide a richer learning experience.

1. The current situation of practical courses in electricians and electronics

1.1 Teaching content

With the continuous progress of electronic science and technology, the teaching content and knowledge points of the course must keep pace with The Times. Old knowledge points and content may no longer meet the needs of modern electronic engineering. Therefore, the curriculum should be reviewed and updated regularly to include the latest techniques, instruments and applications. The

goal of practical courses should be to develop students' hands-on skills, including proficiency in the operation of instruments and testing methods. If students can only operate simple instruments and cannot effectively measure signal parameters, then their application ability in practical engineering projects will be limited. Courses should pay more attention to the cultivation of practical skills, including the correct use of instruments and troubleshooting. Students in different electrical and electrical majors may have different career directions and interests, so individualized education is needed. Course content and methods should be adapted to the requirements of different fields of specialization to ensure that students will be equipped with practical skills and knowledge in the relevant fields at the end of the course. At the same time, the academic levels and interests of different students vary, and there should be opportunities for layered development. Some students may need more challenge, while others may need more support. Courses can have different levels of difficulty or offer different electives to meet the diverse needs of students.

1.2 Teaching methods

The traditional teaching mode is usually teacher-centered, and students lack the opportunity to actively think and explore in the process of passively accepting knowledge. This may lead to a decline in students' interest in learning and a relatively superficial understanding of knowledge. In the process of passively completing the experiment and writing the experiment report, students may just repeat the operation mechanically, without really mastering the practical operation skills. In this case, students' actual ability may be limited. Traditional models are usually not enough to encourage students to think and solve practical problems. Students may perform well in handling standardized experiments, but be overwhelmed when faced with new problems. The traditional model often struggles to meet the individual needs of different students because it is too standardized. Some students may need more challenges, while others may need more support and tutoring. While traditional explanations and demonstrations can be effective in transferring basic knowledge and skills, especially in situations where basic concepts and techniques are needed in a subject, today's education is increasingly moving towards more interactive, hands-on and personalized teaching methods that can better stimulate students' interest and develop their critical thinking and practical application skills. In order to better meet the needs of future careers and society.

1.3 Assessment Method

The assessment result of the course is composed of three parts: the usual result, the experimental acceptance result and the experimental report. The usual scores are mainly the students' experiment performance and experiment preview; The experimental acceptance score is mainly whether the students' experimental data results are correct or not; The results of the experimental report mainly test whether the content of the experimental report is complete and whether the conclusion is correct. In the whole assessment process, the assessment of students' practical ability is insufficient, and the assessment results can not fully reflect the students' understanding of the experiment and the ability to operate the experiment.

2. Integration of online and offline teaching methods

2.1 Revise the syllabus

With the rapid development of science and technology, knowledge in the field of electronic engineering is constantly evolving. Revising the syllabus requires regular review and updating of the knowledge content of the course to ensure that students are exposed to the latest knowledge of electronic components, circuit design techniques and related fields. This helps to cultivate professionals with practical application value. Educational theories and teaching practices continue to evolve, and teaching methods and strategies need to be adjusted in order to improve teaching effectiveness. The use of interactive and hands-on teaching methods, such as lab lessons, project work and group discussions, helps students better understand and apply what they are learning. Dividing learning objectives into different levels is an important way to personalize learning. Different students have different levels of ability, so setting different learning goals for beginner, intermediate, and advanced students can help meet their needs. This way, each student can gradually improve at his or her own level of ability. It is very important to set specific teaching goals for each learning goal level. For example, at the beginning level, students may need to learn to recognize various electronic components, while at the advanced level, they may need to independently design complex electronic systems. These specific goals can help teachers and students understand the standards they need to meet at each level.

2.2 Reframe teaching content

For the reconstruction of electrical and electronic engineering course content, to ensure that the teaching content is consistent with the latest technological trends, as well as to strengthen the basic knowledge and cultivate the engineering application ability. In terms of introducing new electronic devices and technologies, in order to keep up with the latest developments in the field of electronic engineering, the teaching content can introduce new electronic devices and technologies, such as quantum electronics, nanotechnology, flexible electronics, photonics, etc. Students can learn about the basic concepts in these fields, as well as their potential and challenges in practical applications. In terms of green electronic technology and renewable energy, courses can enhance content on green electronic technology and renewable energy, given the importance of sustainable development. Students can learn how to design low-power electronic systems and use a constant supply of electricity from renewable sources. This helps develop students' environmental awareness and ability to apply sustainable technologies. In terms of updating experimental tasks, the experimental tasks are updated to reflect the latest technological trends. For example, experimental tasks could be designed to have students use new types of electronics to build functional circuits, or experiment with the performance of renewable energy systems. These tasks can both reinforce basic knowledge and develop students' hands-on skills.

2.3 Reform teaching models and methods

More problem-oriented learning, project-driven teaching and laboratory practice can be adopted for practical courses such as electrical and electronic practice. Students will gain a better understanding of theoretical knowledge in the process of solving practical problems. The reform of assessment method is an important measure in the field of education, and its implementation can significantly improve the learning effect and comprehensive quality of students. This comprehensive assessment approach, which incorporates SPOC (Small Private Online Course) and experimental teaching, aims to provide students with a wider range of learning opportunities while fostering their self-guided learning and problem-solving skills. Experimental teaching is an important part of the curriculum, and students' practical ability and scientific thinking can be comprehensively assessed by examining their performance during the experimental process. Students need to record the experiment process, results and analysis, which helps cultivate their ability of data analysis and experiment design, allowing them to better translate theoretical knowledge into practical operation. This approach emphasizes the process, not just the result. It focuses on performance during the learning process and emphasizes the achievement of curriculum objectives, rather than just measuring students' level of knowledge through one-time exams. The specific requirements of the examination and the detailed rules of evaluation are shown in Table 1. The process assessment method encourages students to actively participate in learning, continuous improvement and enhance their academic and practical abilities. The introduction of an integrated assessment approach is essential for the overall development of students. Through diversified assessment methods, it can better meet the needs and learning styles of different students, and cultivate graduates with solid theoretical knowledge and practical application ability. This education model reflects the continuous innovation of education, emphasizing the cultivation of students' ability in real situations and innovative thinking. This educational mode will help students better cope with future challenges and opportunities, and lay a solid foundation for their careers.

Table 1 Specific requirements and evaluation rules for the assessment

SPOC	Attendance	5%	5. Complete theory courses on time.	The study record of the SPOC course is graded.
	Online testing	5%	5. After you have finished your online study, take an online test.	Test scores for SPOC courses
	Peacetime	10%	Preview attendance and attendance	Students' attendance in laboratory classes and preparation for experiments

Experimental teaching	Experimental process and results	60%	Students shall prepare, operate and sort out the experiment according to the laboratory regulations, keep the experimental bench clean and tidy, and use the experimental instruments correctly. Practical electronic circuit welding success and realize the function, welding technology to pass.	Whether the students' experimental attitude in class, independent completion of the experiment, operation specifications, operation proficiency, measurement data and data processing methods are correct. The cleanliness and saturation of solder joints should meet the requirements, and the functions of practical electronic circuits should be able to achieve their rated functions.
	Report	20%	Turn in lab reports on time and report well.	Write the experiment report carefully and independently, summarize the problems in the experiment and analyze the solutions.

3. Effects

After the implementation of the teaching reform, this three-stage teaching model was found to have significant advantages in the SPOC curriculum, helping to improve students' learning effectiveness and interactive engagement, and providing them with a richer learning experience. In the pre-class preview for the first stage, students will quickly build up their knowledge of the course content by watching instructional videos and completing online tests. This not only provides the students with the opportunity to learn independently, but also helps the teacher understand the students' basic knowledge level, so that they can better adjust the teaching content and difficulty. In-class application in the second stage is the core of the curriculum. By getting students into the actual classroom environment and interacting with teachers and classmates to apply knowledge in hierarchical tasks, students will gain a deeper understanding of the course content. The teacher's role is not just as a knowledge giver, but also as a guide and problem solver of the learning process. This interactive teaching model stimulates students' interest in learning and cultivates their critical thinking and teamwork skills. The internalization after class in the third stage is the consolidation and extension of knowledge. Students not only consolidate their knowledge by reviewing the course content, but can also further expand their learning by asking questions and looking up materials. Such self-directed learning opportunities develop students' self-management and independent learning skills, which are very important for their future career development. The implementation of the teaching reform has brought about a significant positive impact on students' participation and development. Students take an active part in practice, which not only improves their practical skills and application ability, but also cultivates their innovation awareness and practical operation ability. Especially in the Dachuang Practical engineering projects, students' interest has increased significantly, and they have gained valuable practical experience through these projects, laying a solid foundation for their future career development. In addition, the teaching reform has stimulated students' enthusiasm to participate in provincial and national competitions, leading to an increase in the number of participants. These students have performed well in various competitions and won excellent results such as first prizes many times, earning the school a reputation. This is not only good for personal growth, but also builds a shining image for the school and attracts more ambitious students. In general, the teaching reform provides students with more practical opportunities, promotes their all-round development, cultivates their practical abilities and competitiveness, and lays a solid foundation for their future career and academic paths. This is also one of the important goals of the education reform, which has made important contributions to students' success and social progress.

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