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The Equitable Development of Primary and Secondary Education in Linyi City

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Abstract:Background: primary and secondary education play important roles in promoting educational equity. However, under the influence of multiple complex factors, educational equity is difficult to be effectively guaranteed. Significance: the investigation and analysis of the current situation and causes of educational equity in primary and secondary schools can help to allocate educational resources more rationally, optimize educational financial investment, and reduce educational inequity. Motivation: countermeasures and suggestions are put forward through th analysis of the the current situation and causes of educational inequity in Linyi City. Data: teachers and students from 10 primary and middle schools in 5 districts and counties of Linyi City were selected as the survey objects, and the basic information of schools and families, school resources, and students' academic performance were collected. Methods: analysis of variance (ANOVA) and regression analysis were used to explore the impact of educational resource differences on students' academic performance. Results: there were significant differences in students' academic performance under different family conditions, learning conditions, extracurricular tutoring intensity, teachers' teaching ability, and school facilities ($p<0.01$). The family conditions, learning conditions and teachers' teaching ability had significant effects on the learning performance of primary and secondary school students in Linyi city, and whether the school was located in the city center and the edge of the city also had significant effects on the students' learning performance. Conclusion: differences in family conditions and extra-curricular tutoring intensity lead to educational inequity to a certain extent, and school educational resources partially guarantee educational equity. Suggestions: the countermeasures to solve the inequity of education should be put forward from the aspects of building learning environment and atmosphere, reducing after-school burden and promoting quality education in non-central urban areas.

Keywords: educational equity; primary and secondary schools; compulsory education; educational resources; Linyi, Shandong province

1. INTRODUCTION

Education has always been one of the important ways to promote social mobility and ensure social equity. As China's ruling party, the Communist Party of China (CPC) has made it clear that it will strive to ensure that every child has fair and quality access to education[1]. Among the many reasons leading to the inequity of primary and secondary education, the differences in regional resources, school resources, teachers and family conditions are considered to be the most important ones[2]. Among them, family background is one of the most concerned factors of educational equity, and many studies have focused on the impact of such factors on educational equity in primary and secondary schools. Parents in areas with higher social class can provide more available resources for their children's growth, but the advantages of these resources will not automatically translate into the benefits of children's education[3]. Expanding education supply does not necessarily achieve educational equity, but it is certain that the more resources parents have, the more likely they are to influence their children's education planning and decision-making[4]. From the perspective of schools, China has increased the financial expenditure and investment in compulsory education by vigorously promoting compulsory education in recent decades, which has realized the fairness of education resource allocation in the regional scope to a large extent. However, whether it can ensure the fairness of education quality is still worth studying[5]. In recent years, the novel coronavirus epidemic has also had a negative impact on educational equity, and the issue of educational equity in the context of the epidemic has also attracted widespread attention[6]. In view of the above problems, this paper takes Linyi City of Shandong Province as an example to investigate the current situation of primary and secondary education equity in this region, and analyzes the main factors leading to educational inequity, so as to provide a basis for improving the quality of school education and ensuring educational equity.

2. Data sources and research methods

2.1 Research objects and survey design

The subjects were teachers, students and school leaders from 10 primary and secondary schools in 5 districts and counties of Linyi City, Shandong Province. The survey sampling and questionnaire design adopted a phased probability proportional sampling method. In the first step, 5 counties (districts) were selected from 3 districts and 9 counties in Linyi City; in the second step, 2 schools were selected from 5 counties (districts). In the third step, one fourth grade class and one eighth grade class were selected from each school; the fourth step, the selected class of students, teachers, school leaders as samples, as the final survey objects. Through the above methods, a total of 1087 students were involved in the survey; 960 samples were retained after removing invalid samples, and the effective rate of the questionnaire was 88.3%. The questionnaire included student questionnaire, teacher questionnaire and school leader questionnaire. The data of the three types of questionnaires could be correlated through the codes of schools and classes to jointly reflect the situation of students' performance, family resources and school resources. From the perspective of gender, boys accounted for 51.6% and girls accounted for 48.4%. In terms of family location, 55.2% of the students were from rural areas and 44.8% from urban areas.

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2.2 The Research Methods

1. Descriptive statistics. To analyze the basic data of primary and secondary education equity and related variables in Linyi City, we can provide support for further revealing the key factors affecting the primary and secondary education equity in Linyi City.

2. Analysis of variance. One-way analysis of variance (ANOVA) was carried out to analyze the contribution of various factors to the change of student achievement so as to determine the influence of each factor on the change of student achievement.

3. Entropy value method. Due to the large number of questions related to educational equity in the questionnaire, we did not convert all the questions into variables one by one. Instead, we applied entropy method to weighted sum some questions so as to combine the data of multiple questions into one variable[7]. For example, students' learning conditions include three aspects: whether students have independent desks, the number of books in their families, and the situation that students have computers and networks. Therefore, there are three indicators used to evaluate learning conditions, which need to be combined into a comprehensive indicator to evaluate learning conditions by entropy method. The specific steps of entropy method are as follows:

If the data set contains m samples and n indicators, the original data matrix (xij)m×n,xij can be used to represent the value of the j indicator of the i-th sample, and then all the original data are normalized by using the standardization method of the difference between extreme values, and the obtained index data are standardized positive values with values ranging from 0 to 1. The normalization method is as follows:

$$y_{ij} = \left| \frac{x_{ij} - min\ x_{ij}}{max\ x_{ij} - min\ x_{ij}} \right|$$

After the normalized values of each index are obtained by the above method, the specific gravity p_{ij} of the i-th value of the j-th index can be calculated by the following formula:

$$p_{ij} = \frac{y_{ij}}{\sum_{i=1}^{m} y_{ij}}$$

If p_{ij}=0, then assign p_{ij} to 0.000001 to avoid the denominator being 0. Then, calculate the entropy e_j of the j-th index:

$$e_j = -k \sum_{i=1}^{m} p_{ij} \ln p_{ij}, k > 0, 0 \le e_{ij} \le 1$$

Calculate the difference coefficient g_j of index j:

$$g_j = 1 - e_{ij}$$

If the difference of the original index value x_{ij} is smaller, the value of the difference coefficient g_j will be smaller. On this basis, the final weight value w_j of each index can be obtained by further normalizing the obtained difference coefficient:

$$w_j = \frac{g_j}{\sum_{j=1}^{n} g_j}$$

Using the above index weights to sum the index values of each sample, we can get the comprehensive level v_i of each sample:

$$v_i = \sum_{j=1}^{n} \left(w_j \times y_{ij} \right) (i = 1,2, \ldots, m)$$

4.Multiple regression analysis. Regression analysis is used to analyze the influence of family conditions, after-school services, teachers' ability and school facilities on students' performance, which can explain whether differences in these factors lead to differences in students' performance.

3. The Research Results

3.1 The Current situation of education equity in primary and secondary schools in Linyi City

Table 1 shows students from families with different economic conditions, their learning conditions and their participation in after-school services. It can be seen that the proportion of students from families with "very rich" and "relatively rich" is only 0.83% and 9.90% respectively. The majority of students have a separate desk at home, accounting for 81.77%; 40.83%, 33.23% and 25.83% of the students had more, no more or no less, and no more books at home, respectively. 57.29% of the students had computers and Internet at home; only about 30 to 40 percent of the students participated in after-school tutoring. Table 1 presents the assignments of each variable for subsequent analysis.

Table 1 Education equity of primary and secondary schools in Linyi City

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	hour1565.83%About 1 to 2 hours211011.46%About 2 to 3 hours3565.83%About 3 to 4 hours4353.65%About 4 + hours5282.92%	2 to 3 hours3565.83%About 3 to 4 hours4353.65%About 4 + hours5282.92%	2 to 3 hours3565.83%About 3 to 4 hours4353.65%About 4 + hours5282.92%	2 to 3 hours3565.83%About 3 to 4 hours4353.65%About 4 + hours5282.92%
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	About 3 to 4 hours4353.65%About 4 + hours5282.92%	4353.65%About 4 + hours5282.92%	353.65%About 4 + hours5282.92%	3.65%About 4 + hours5282.92%
	About 4 + hours5282.92%	5282.92%	282.92%	2.92%

There are six variables used to reflect educational equity, which are family conditions, learning conditions, extracurricular tutoring, teachers' teaching ability, school facilities level, and school location. Among them, teachers' teaching ability included teachers' educational background (master's degree or above =4, bachelor's degree =3, self-examination bachelor's degree =2, junior college =1), whether they have received mental health training (yes =1, no =0), teaching age, professional title (senior teacher =4, first level teacher =3, second level teacher =2, third level teacher =1, no professional title =0).The level of school facilities included the size of the school track (200 meters = 1,300 meters = 2,400 meters =3), the availability of related facilities (such as laboratories, computer classrooms, libraries, music rooms, gymnasiums, etc. If yes, add 1 to the number of school facilities), the number of computers used for learning, the number of books, and the financial allocation per student; the school location includes three options: urban center, urban fringe, and rural. Using the entropy method, we calculated the weighted sum value of each index including family condition, learning condition, extracurricular tutoring, teachers' teaching ability and school facilities level. The results of one-way analysis of variance showed that there were significant differences in students' academic performance under different family conditions, learning conditions, extracurricular tutoring intensity, teachers' teaching ability and school facilities level ($p<0.01$), indicating that the differences in students' family resources and school resources may lead to the inequity of primary and secondary education.

Table 2 Results of analysis of variance

variabledfSum of squaresThe mean squareFPR(>F)Family conditionsBetween groups4153559.64938389.9127.3710.000Within the group9544968991.5345208.587Learning conditionsBetween groups2740658.411370329.20680	dfSum of squares	Sum of squares	The mean squareF	FPR(>F)Family conditionsBetween groups4	PR(>F)
.7950.000Within the group9564381892.7714583.570Extra-class continuationBetween groups270396.36435198.1826.6600.001Within the group9565052154.8195284.681Teacher teaching abilityBetween groups2783015.439391507.71986.2490.000Within the group9564339535.7444539.263Level of school facilitiesBetween groups2179779.28589889.64217.3860.000Within the group9564942771.8985170.263The school locationBetween groups2716549.157358274.57977.7370.000Within the group9564406002.0254608.789					

The Analysis of influencing factors of education equity in primary and secondary

schools in Linyi City						
Family conditionsBetween groups4	Between groups4	4153559.64938389.912	153559.64938389.9127.3710.000Within the group95449689 91.5345 208.587	38389.9127.371	7.3710.000Within the group95449689 91.5345 208.587	0.000Within the group95449689 91.5345 208.587
	Within the group95449689 91.5345 208.587	9544968991.5345208.587Learning conditionsBetween groups2	4968991.5345208.587Learning conditionsBetween groups2	5208.587Learning conditionsBetween groups2	Learning conditionsBetween groups2	Learning conditionsBetween groups2
Learning conditionsBetween groups2	Between groups2	2740658.411370329.20680.795	740658.411370329.206	370329.20680.7950.000	80.7950.000Within the group95643818 92.7714 583.570	0.000Within the group95643818 92.7714 583.570
	Within the group95643818 92.7714 583.570	9564381892.7714583.570Extra-class continuationBetween groups2	4381892.7714583.570Extra-class continuationBetween groups2	4583.570Extra-class continuationBetween groups2	Extra-class continuationBetween groups2	Extra-class continuationBetween groups2
Extra-class continuationBetween groups2	Between groups2	270396.36435198.1826.6600.001Within the group95650521 54.8195 284.681	70396.3643519 8.1826.6600.001Within the group95650521 54.8195 284.681	35198.1826.660	6.6600.001Within the group95650521 54.8195 284.681	0.001Within the group95650521 54.8195 284.681
	Within the group95650521 54.8195 284.681	9565052154.8195284.681Teacher teachingabilityBetween groups2	5052154.8195284.681Teacher teachingabilityBetween groups2	5284.681Teacher teachingabilityBetween groups2	Teacher teachingabilityBetween groups2	Teacher teachingabilityBetween groups2
Teacher teachingabilityBetween groups2	Between groups2	2783015.439391507.71986.249	783015.439391507.719	391507.71986.2490.000	86.2490.000Within the group95643395 35.7444 539.263	0.000Within the group95643395 35.7444 539.263
	Within	956433	433953	4539.26	Level of	Level of
	the group95643395 35.7444 539.263	9535.7444539.263Level of schoolfacilitiesBetween groups2	5.7444539.263Level of schoolfacilitiesBetween groups2	3Level of schoolfacilitiesBetween groups2	school facilitiesBetween groups2	school facilitiesBetween groups2
Level of schoolfacilitiesBetween groups2	Between groups2	2179779.28589889.642	179779.28589889.64217.3860.000Within the group95649427 71.8985 170.263	89889.64217.3860.000	17.3860.000Within the group95649427 71.8985 170.263	0.000Within the group95649427 71.8985 170.263
	Within the group95649427 71.8985 170.263	9564942771.8985170.263The school location	4942771.89851 70.263The school location	5170.263The school location	The school location	The school location
The school location	Between groups2	2716549.15735 8274.57 977.737	716549.157358 274.579	358274.57977.7370.000	77.7370.000Within the group95644060 02.0254 608.789	0.000Within the group95644060 02.0254 608.789
	Within the group95644060 02.0254 608.789	9564406002.0254608.789**The Analysis of influencing factors of education equity in primary and secondary schools in Linyi City**	4406002.0254608.789**The Analysis of influencing factors of education equity in primary and secondary schools in Linyi City**	4608.789**The Analysis of influencing factors of education equity in primary and secondary schools in Linyi City**	**The Analysis of influencing factors of education equity in primary and secondary schools in Linyi City**	**The Analysis of influencing factors of education equity in primary and secondary schools in Linyi City**

3.2 The Analysis of influencing factors of education equity in primary and secondary schools in Linyi City

Multiple regression analysis method can further analyze the changes of various factors comprehensively affecting students' performance, and then find out the most influential factors of education equity in primary and secondary schools. The results of regression analysis are shown in Table 3.

Table 3 Regression analysis results

variablecoefstd.errtP>|t|[0.025	coefstd.errtP>|t|[0.0250.975]const174.02178.56220.3260157.22	std.errtP>|t|[0.0250.975]const174.02178.56220.3260157.2 2190.823Family conditions10.05073.767	tP>|t|[0.0250.975]const	P>|t|[0.0250.975]const	[0.025	0.975]
const174.02178.56220.3260	174.0217	8.56220.3260157.22190.823Family conditions10.05073.767	20.3260	0157.22	157.22	190.823Family conditions10.05073.7672.6680.00817.4432.659Learning conditions12.12381.20610.05509.75814.49Extra-class continuation
Family conditions	10.05073.7672.6680.00817.4432.659Learning conditions12.1238	3.7672.6680.008	2.6680.00817.4432.659	0.00817.4432.659Learning conditions12.12381.206	17.443	2.659
Learning conditions	12.12381.20610.05509.75814.49	1.20610.05509.75814.49	10.0550	09.75814.49Extra-class continuation0.6271.0050.6240.533	9.75814.49Extra-class continuation0.6271.0050.6240.533	14.49
Extra-class continuation0.6271.0050.624	0.6271.0050.6240.5331.34	1.0050.6240.533	0.6240.5331.3462.6Teacher teaching ability1.48050.197	0.5331.3462.6	1.3462.6Teacher teaching ability1.48050.197	2.6Teacher teaching ability
Teacher teaching ability1.48050.197	1.48050.1977.513	0.1977.51301.8671.094Level of school facilities	7.51301.8671.094Level of school facilities0.0303	01.8671.094Level of school facilities0.0303	1.8671.094Level of school facilities0.03030.120.2530.8010.2660.205	1.094
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4. CONCLUSIONS

4.1 Research Conclusion

(1) Family conditions and extracurricular services have a partial impact on educational equity

Families at the upper levels of student achievement score is higher, for the family condition the middle and lower levels of students, family, of the best students in the relatively low average grades, family condition in the students and other student's grade point average differ from water about 20-30 points, suggesting that family economic conditions on the education fair is to have certain influence, Students with upper-middle level family conditions are more likely to get better grades than students with lower-middle level family conditions. At the same time, students from the most advantaged families did the worst, suggesting that good family conditions do not necessarily lead to good grades for students from such families. The average score of students with good learning conditions is about 40 points higher than that of students with medium learning conditions, and about 50 points higher than that of students with poor learning conditions, indicating that learning conditions have a great impact on educational inequity. The transformation of good family conditions into good learning conditions requires certain conditions, such as the attention of parents, the purchase of relevant learning facilities and the construction of learning environment. In addition, extracurricular services do not lead to the inequity of primary and secondary education, but the intensity of extracurricular tutoring has a certain impact on the inequity of education. The average score of students who participate in the middle and high level of extracurricular tutoring is more than 250 points, which is about 20 points higher than that of students with low level of tutoring. Although the impact of extracurricular tutoring on educational equity is not significant, extracurricular services do have a positive impact on academic performance, especially between students who participate in tutoring and those who do not.

(2)School educational resources partially guarantee educational equity

The average score of the students whose school facilities were "medium" and "good" was above 260, while the average score of the students whose school facilities were "poor" was only 237.48. The average score of the students whose school facilities level is medium or above is more than 20 points higher than that of the students whose school facilities level is poor. The school facilities mainly include teaching, sports, learning activities and cultural facilities. Students with poor facilities can only meet the basic learning needs of students, while it is difficult to meet the diverse needs of students in other aspects such as experiments, computer learning, sports activities and cultural entertainment. As the basic educational resources, school facilities play important roles in the process of ensuring educational equity. It is shown that as long as the facilities in the school are not too poor, the difference in the average score of students is not very significant. There are great differences in the level of school facilities between urban centers, urban fringes and rural areas. The scores for school facilities in the city center range from 40 to 88, and those in the city fringe range from 11 to 67. Scores for school facilities in rural areas range from 26 to 32. All of these indicate that schools in urban areas have better facilities. However, students in schools in rural and central urban areas scored higher on average than those in schools in peripheral urban areas.The level of facilities in schools in the urban fringes is uneven, which may be the main reason for the lower average score of students in the urban fringes.In addition, the higher the teaching ability of the teachers, the lower the students' scores, which may be related to the fact that the teachers with strong ability pay more attention to quality education, while the teachers with poor teaching ability may pay more attention to exam-oriented education and improve the students' scores.

4.2 Discussion and suggestions

First of all, more favorable learning conditions should be created for primary and secondary school students to ensure that students can get a good education in a better learning environment and atmosphere. The investment in students is directly proportional to their academic performance and output[8] Increasing investment in learning environment and atmosphere can help students obtain more favorable learning conditions so as to better guarantee educational equity.

Secondly, it is necessary to reduce the after-class burden for students, avoid making students participate in all kinds of remedial activities after class, and make students in the process of high-intensity extracurricular learning. East Asian countries pay attention to educational investment, so many students receive extracurricular tutoring services purchased by their parents outside of school, which leads to fierce competition among students[9]. In the past two years, the Chinese government has issued policy documents on regulating the development of off-campus training institutions and reducing the burden on students in compulsory education, which has had a positive effect on reducing the burden on students[10].

Finally, we should strengthen the construction of educational infrastructure and the promotion of quality education in primary and secondary schools in the urban fringe and rural areas, so as to promote the more comprehensive development of students in non-central urban areas. For a long time, in order to catch up with the education level of the schools in the central urban areas, the non-central urban schools in China have focused on the exam-oriented education[11]. Therefore, they pay more attention to improving students' performance, but neglect to cultivate students' quality and comprehensive ability in other aspects. In order to solve this problem, while the construction of educational infrastructure is strengthened, quality-oriented education should be further promoted in the urban fringe and rural areas, so that students can obtain the same all-round development opportunities as those in the central cities.

5. REFERENCES

[1]Strive to provide fair and quality education for every child. China Higher Education,2017(22):26-27.]

[2] Kang Wenyan, Liu Hui, Li Dexian. [2] Kang W Y, Liu H, Li D X. The connotation, dilemma and transcendence of process equity in primary and secondary education in China [J]. Basic Education Curriculum,2019(15):33-40. (in Chinese)

[3] Zhang Heping, Zhang Qinggen, Yin Xia. [3] Family capital, out-of-school training and educational opportunity equity [J]. Educational Academic Monthly,2021(02):3-11.]

[4] Rolleston C, Iyer P. Beyond the basics: Access and equity in the expansion of post-compulsory schooling in Vietnam[J]. International Journal of Educational Development, 2019, 66: 223-233.

[5] Li Xiangyun, Tong Zefeng. [5] [Li X Y, Dong Z F. How Much Financial Input is needed to develop fair and Quality Compulsory Education -- A case study of primary schools in B and W counties. Macro Quality Research, 222,10(04):118-128.]

[6] Shi Y, Pyne K, Kulophas D, et al. Exploring equity in educational policies and interventions in primary and secondary education in the context of public health emergencies: A systematic literature review[J]. International Journal of Educational Research, 2022, 111: 101911.

[7] Ren Z. Evaluation Method of Port Enterprise Product Quality Based on Entropy Weight TOPSIS[J]. Journal of Coastal Research, 2020, 103(SI): 766-769.

[8] Zhou G, Zhang F, Fei Y. Research on the development efficiency of educational science and technology in China: an approach from three-stage DEA Malmquist model[J]. Technology Analysis & Strategic Management, 2022: 1-16.

[9] Wiseman A W. Does Inequality Stay in the Shadow? The Cross-national Effects of Educational Equity on Private Tutoring and Student Achievement[J]. International Journal of Educational Research, 2021, 109: 101808.

[10] Gao R, He T, Liao Y, et al. An investigation on the academic burden of Chinese students ranging from primary schools to universities based on a word association test in Guangdong Province[J]. International Journal of Environmental Research and Public Health, 2022, 19 (4) : 2481.

[11] Yin Y M, Mu G M. Examination-oriented or quality-oriented? A question for fellows of an alternative teacher preparation program in China[J]. The Australian Educational Researcher, 2022, 49 (4) : 727-742.

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Research on the Integration and Development of Technology and Teaching Innovation

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Abstract:Under the background of education informatization 2.0, this paper conducts research on the integration and development of information technology and education and teaching innovation in Linyi University. Summarize the achievements of education and teaching innovation and development of Linyi University. Collect and organize educational and teaching achievements, summarize successful experiences, and establish a typical image through literature method, interview method and investigation method .Summarize development achievements and share successful experiences, so that other schools can establish a development plan that fully integrates information technology and education and teaching according to actual conditions and local conditions. Linyi University uses information technology to display Yimeng spiritual education in the classroom through holographic projection technology combining light and shadow, immersive VR technology and other channels, which deepens the impression and deepens the feelings.

Keywords: information technology, education informatization 2.0 , integration, development

1. Educational Informatization 2.0 and Its Development Significance

With the widespread popularization and in-depth application of Internet information technologies such as cloud computing, big data, Internet of Things, mobile Internet, and artificial intelligence, human society is transforming from the era of industrial economy to the era of knowledge economy and information economy, which will inevitably increase the productivity of society. Reconstruction and improvement will inevitably affect various production relations in society. The development of the higher education industry is also deeply affected.

Educational informatization refers to the process of comprehensively and deeply applying modern information technology in the field of education to promote educational reform and development. Its technical features are digitization, networking, intelligence and multimedia, and the basic features are openness, sharing, interaction and collaboration. [1] Promote the modernization of education with educational informatization, and use information technology to change the traditional model. The development of educational informatization has brought about major changes in educational forms and learning methods, and promoted educational reforms. It has had a huge impact on the traditional educational thought, concept, mode, content and method. Education informatization is an important part of national informatization. It has far-reaching significance for transforming educational thoughts and concepts, deepening educational reform, improving educational quality and efficiency, and cultivating innovative talents. It is an inevitable choice to realize the leap-forward development of education. The construction significance of educational informatization can be summarized into four aspects: promoting the wide application of information technology in the field of education , promoting the reform and development of education , cultivating innovative talents who meet the requirements of the information society , and promoting the modernization of education. Under the guidance of the new requirements, we should combine the "Internet +" technology to explore a new mode of practicing student management. In the "Education Informatization 2.0 Action Plan" issued by the Ministry of Education of the People's Republic of China on April 13, 2018, the construction goals of educational informatization were stated as follows: "Strive to build a new model of talent training under the conditions of 'Internet +' , develop a new model of Internet-based educational services, and explore a new model of educational governance in the information age." [2]

2. Reasons for the rapid integration and development of information technology and teaching innovation

Build a solid foundation and comprehensively improve the level of informatization construction . Linyi University attaches great importance to informatization work. As early as 2008, it established the school's digital campus construction leading group to plan, guide and coordinate the entire school's informatization construction work. Especially since the opening of the new campus, leveraging on the high starting point and high-level hardware configuration of the new campus, a large amount of funds have been invested to carry out the campus informatization construction in an all-round way. The informatization construction has achieved rapid development and gradually built a relatively complete and solid network foundation. facilities, a relatively advanced and mature digital campus platform, and a relatively comprehensive and high-quality modular application system [3] .

Early start: Our school started the campus card system in 2004, built the educational administration system in 2005, and became the city node unit of China Education and Computer Network in Linyi City in 2007. At present, the campus network covers three places and seven campuses, with nearly 20,000 information points, 3.1G export bandwidth, and a total of nearly 100 million yuan in information equipment. The

IPV6 experimental network implements dual-stack access to CERNET2.

Higher starting point: In 2009, the school made a one-time investment of 11.66 million yuan to build a relatively advanced digital campus system in China. Relying on the three platforms of unified identity authentication, unified information portal and shared database, it integrates and operates more than 20 business information systems such as educational affairs, scientific research, academic engineering, all-in-one card , and office automation. At the same time, actively exert the support guarantee and multi-service bearing function of the campus network, and highlight the informatization means in the construction and operation of modular application systems such as campus security monitoring, standardized test rooms, energy-saving supervision platforms, TOEFL and GRE test centers, and digital campus broadcasting. of quality and efficiency.

Channel integration: The school also attaches great importance to the use of social resources to promote the construction of informatization, actively explores strategic cooperation with communication operators, and adheres to the principle of "co-construction, sharing and mutual benefit" in relevant experimental teaching, graduation practice. Substantial progress has been made in cooperation, employment guidance and campus wireless network construction. In 2013, WLAN coverage of teaching area, experimental area, office area and public activity area has been realized.

Exchange and sharing: Actively carry out exchanges and promotion in the field of informatization. In recent years, the school has successively hosted important activities such as the Shandong Higher Education Informatization Construction Seminar and the Shandong Computer Society Annual Meeting, and conducted extensive exchanges in computer teaching and research, forward-looking exploration and practical experience of informatization.

Consolidate and improve: Since the pilot program, the investment and application have been continuously increased, the information infrastructure has been continuously improved, the configuration of the core equipment of the campus network has been improved, the export bandwidth has been expanded, and the wireless network has basically achieved full coverage. The digital campus platform and business system were upgraded and optimized. Strengthen network security protection work, and effectively carry out the project of quality assurance and legalization of important information systems.

3. Contents of the integration and development of information technology and teaching innovation

In order to deepen the reform of education and teaching, accelerate the in-depth integration of information technology and curriculum teaching, and gradually realize the transformation from "teacher-centered" to "student-centered", Linyi University will improve the level of education and teaching and the quality of talent training. The first batch of pilot universities for the construction and application of educational informatization at the undergraduate level, actively promote the construction of smart campuses, constantly update educational concepts, use information technology, and realize the principles of intelligent technology, diversified functions, comprehensive services and scientific management. Data sharing of key business systems such as educational affairs, scientific research, personnel, and academic engineering, and actively build a new model of smart education suitable for undergraduates. It has laid a good foundation for further comprehensively improving the level of informatization work of Linyi University, building a smart campus, and boosting the development of the school's connotation. [4]

Construction of digital teaching resources. The construction of teaching resources is the foundation of educational informatization. Use modern information technology to complete the digital transformation of all course teaching resources. The development and production of teaching resources must comply with the national "Technical Specifications for Educational Resources Construction", and the material-based teaching resources must meet the requirements of students' online learning. Encourage teachers to collaboratively develop or introduce high-quality teaching resources.

Construction of online teaching platform. The school's online teaching platform provides a controllable and manageable teaching and learning space for teachers and students in the school. Teachers are required to use cyberspace to carry out teaching activities such as lesson preparation, teaching, and study guidance; students use cyberspace to achieve autonomous learning, collaborative learning and inquiry learning; educational administration departments use cyberspace to conduct comprehensive student evaluations and comprehensive analysis of teaching to improve management efficiency.

The construction of teachers' informatization teaching ability. The school adopts a variety of methods and means such as training, seminars, and observation to improve teachers' teaching ability in an information-based environment, guide teachers to establish the educational concept of "teacher-led, student-centered", help teachers learn and master information technology, and encourage teachers to explore "teaching". A diversified blended teaching model that integrates and complements internal and external classes, online and offline, on-campus and off-campus, and mobile and fixed. [5]

Construction of teaching evaluation system. Reform teaching and evaluation methods . The school uses information technology to record the teaching process of teachers, integrates teachers' online teaching behavior, student satisfaction, expert evaluation, etc., and establishes an evaluation system for the effectiveness of curriculum informatization. Teachers improve course assessment methods, use information technology to record students' learning process, focus on the evaluation of students' ability and quality of teaching objectives, and establish a formative evaluation system for students by integrating students' online learning behavior, classroom performance, daily homework and examinations.

4. Compared with other colleges and universities, the characteristics of education informatization construction of Linyi University

Course informatization teaching is divided into three application levels: primary, intermediate and advanced. The school plans to complete the curriculum informatization construction in 3 years. By the end of 2018, all courses will meet the primary application requirements; by the end of 2019, 50% of the courses will meet the intermediate application requirements; by 2020, 20% of the courses will

meet the advanced application requirements; courses that fail to meet the primary application requirements will not be offered. .

Primary application requirements. Each course needs to publish basic teaching information and main teaching materials such as course introduction, teacher information, teaching syllabus (course standard), teaching calendar, assessment methods, teaching plan, reference materials, etc. on the school's online teaching platform.

Intermediate application requirements. While sharing teaching resources for each course, teachers need to use the school's online teaching platform to publish course notices, conduct academic surveys, assign and correct homework, organize online discussions and answer questions, improve test question banks and online tests, etc.

Advanced application requirements. Teachers should make full use of the network learning space to conduct research and practice of "teaching" and "learning". All teachers of the course group jointly build course resources, carry out collaborative course preparation and teaching, and form a joint force of course construction; timely update teaching content, refine teaching design, and realize the refinement of the student assessment process, the analysis of teaching effects and the real-time feedback; flexible use of flipped classroom, Independent classrooms, micro classrooms and scene classrooms, etc., actively carry out seminar-style teaching, and form an information-based teaching model with certain characteristics. Strive for 1-2% of the courses to be launched on platforms such as Wisdom Tree and Erya .

Measures to ensure the integration and development of information technology and teaching innovation:

Organizational guarantee. The Office of Academic Affairs takes the lead in establishing a working group for the reform of curriculum informatization teaching, which is responsible for the promotion of the entire school's curriculum informatization teaching work. Each teaching unit has set up a curriculum informatization teaching reform working group headed by the top administrator, responsible for the planning and implementation of the curriculum informatization teaching work in the unit.

Policy guarantee. The application level of course informatization teaching is one of the basic conditions for teachers to apply for various teaching-related projects and awards. The school organizes a selection of "Excellent Informatization Teaching Courses" every school year. The school selects the best to cultivate high-level online open courses facing the society. Each teaching unit may formulate incentive policies suitable for the unit.

Financial security. The school sets up special funds every year for informatization training, awards, teaching resource library construction, software and hardware operation and maintenance, etc.

Technical support. The Academic Affairs Office and the Network Center are responsible for the operation and service of the school's online teaching platform, statistics and analysis of the implementation of curriculum informatization teaching, and holding information technology training and experience exchange meetings. The network information center is responsible for providing the system environment, data storage space and network services of the network teaching platform. [6]

5. Integration and development achievements of information technology and teaching innovation

Linyi University adheres to the principle of educating people, takes the renewal of educational concepts as the guide, takes the construction of high-quality educational resources and information-based learning environment as the foundation, takes the innovation of learning methods and educational models as the core, and takes the system mechanism and team building as the guarantee, and has always attached great importance to it. The construction and application of educational informatization shall accelerate the integration and innovation of information technology and education and teaching. [7] In 2014, it became the first batch of educational informatization pilot units in Shandong Province. In the first half of 2017, in the pilot acceptance review organized by the Shandong Provincial Department of Education, Linyi University passed the acceptance inspection with excellent results and high quality, becoming one of the 11 demonstration units of ordinary colleges and universities in the province. In three years, the digitalization and network transformation of all courses have been completed, an information-based learning environment with high - quality teaching resources that everyone can enjoy, and a diverse and effective information-based teaching mode and learning method have been formed. The teaching ability of teachers has obvious origins Students' interest in learning and learning effect have been significantly improved, and the role of informatization in promoting education and teaching reform has been fully demonstrated.

6. REFERENCES

[1] Zhang Wei. Grasp the new direction of construction from the new development trend of education informatization [J]. China Education Informatization, 2022, 28(02): 43-49.

[2] Wang Zhenzhen. The status quo and thinking of the evaluation of the informatization level of basic education in my country [J]. Journal of Henan Radio and Television University, 2022, 35(02): 93-99.

[3] Sun Shisheng. Research on the Effective Mechanism of Improving Teachers' Information-based Teaching Ability in Local Undergraduate Universities: Taking Linyi University as an Example [J]. Modernization of Education, 2019,6(79):150-151+165.DOI:10.16541/j .cnki.2095-8420.2019.79.056.

[4] Shen Lijun, Ma Xiaochun. Research on the Integration of Teacher Education Curriculum in Local Universities under the Background of Information Technology: Taking Linyi University as an Example [J]. Teaching Research, 2016, 39(02): 41-44+50.

[5] Yi Yunlong, Guan Ying, Yang Sheng. Exploration on ways to improve the informationization ability of college teachers' education [J]. Journal of Shenyang Institute of Technology (Social Science Edition), 2022, 18(02): 102-106. DOI: 10.13888 /j.cnki.jsie(ss).2022.02.020 . _ _ _

[6] Li Dongpeng. Innovation and practice of educational technology work in colleges and universities in the era of educational informatization 2.0 [J]. Science and Technology Vision, 2021(35):116-117.DOI: 10.19694/j.cnki.issn2095-2457.2021.35.54.

[7] Education Informatization 2.0: The Key Historical Transition of Information Technology Reforming Education in the New Era [J]. Yang Zongkai, Wu Wei, Zheng Xudong. Education Research. 2018(04)

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Information Literacy Education in the Context of Education Informatization

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Abstract:In the era of educational informatization, the application of information technology in the field of education is becoming more and more extensive. In order to improve people's ability and literacy of autonomous learning, problem-solving and knowledge innovation , this study aims to provide reference for information literacy education and research. It hopes to innovate the way of information literacy education by exploring new ideas, new concepts and new models.

This study used bibliometric method. It uses the Web of Science core data set as the data source, searches the literature related to information literacy in the past 20 years, selects the representative research literature, and analyzes the literature from the perspectives of publication year, leading countries, institutions and authors. It uses CiteSpace as a tool to conduct citation analysis of relevant literature, identify important node literature and research points, and grasp the research overview and development context of information literacy education.

The content of information literacy education research has the diversity of theory and practice, and it is applied to various scenarios such as scientific research, study and life. This study can promote its reform and innovation, and make corresponding contributions to popularizing information literacy education.

Information literacy education can promote the development of quality education. It helps people to rapidly improve their learning ability, scientific research ability, problem-solving ability and innovation ability. This study can provide reference for information literacy educators.

Keywords: Informatization of education, Information literacy education, CiteSpace, Citation analysis

1. INTRODUCTION

With the rapid development of information technology and corresponding equipment, the application of them in the field of education is becoming more and more extensive, and it is gradually inseparable from the assistance of information technology. The education industry has shown the characteristics of education informatization. Information technology has become a tool for education and teaching. The teaching and learning mode has gradually changed from the traditional offline education mode to the new offline and online hybrid mode. Information resources are no longer a single paper material, but extremely rich network information resources. How to quickly search and identify the knowledge content you need from a large number of network information resources depends on your own good information literacy ability.

The essence of information literacy is a basic ability that people need to possess in global informatization. This ability enables people to determine when information is needed, and how to access it, how to evaluate and effectively use it.

Information literacy education is the training of users' ability to search, access, evaluate and use information. Its main goal is to establish the information awareness of the educated, cultivate their ability to obtain and use information, and make them independent self-learners with the ability of lifelong learning, so as to promote the development of the entire quality education.

This paper analyzes and researches information literacy-related research papers in the past 20 years, understands the relevant research overview, and provides ideas and references for the latest research. I hope that this research will help information literacy education innovate educational approaches and improve educational standards.

2. METHODOLOGY

This study used the Web of Science Core Collection as the data source to search for the main relevant literature of information literacy research.

First, select the Web of Science core collection database, select "subject" in the search field, enter "information literacy" in the search term, select "article" and "review" for the document type, select "2003-2022" for the time period, the search date is October 18, 2022, and return 3596 literature records.

By analyzing the collected data, sorting and interpreting from the perspectives of the number of published articles in the year, countries/research institutions, authors, etc., to grasp the overview of information literacy-related research from a macro perspective. Chart the way for the practical development of information literacy education.

At the same time, CiteSpace tools are used to explore and study the information literacy research literature. In research, the common citation and co-word network functions of this tool are mainly used to analyze and interpret the research content from the perspective of citation.

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3. RESULTS AND DISCUSSION

3.1 The Number of publications published annually

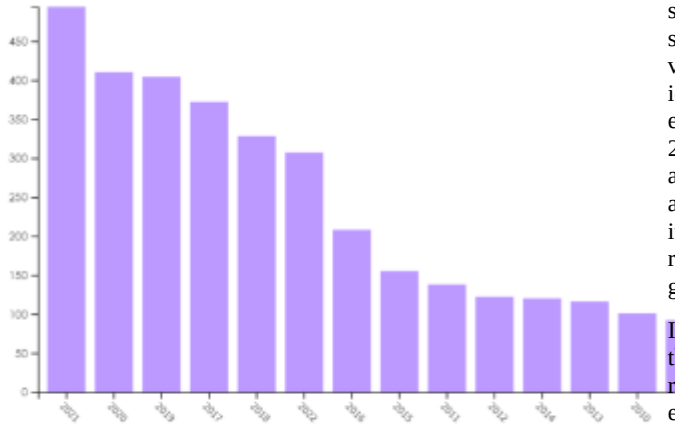

Figure1 Number of publications per year

According to the number of relevant literature published each year from 2003 to 2022 provided by the search results, it can be seen that before 2006, the annual literature volume was small, indicating that the relevant research in this period is still in the exploratory period. Early researchers put forward various research opinions and hypotheses, provide research ideas and ideas, and allow subsequent researchers to further explore, verify and develop. In the 10 years from 2007 to 2016, there was a significant leap in the amount of literature, and relevant research has been improved. Since2017, the amount of literature has grown by leaps and bounds. In2021, it reached about 500 articles, which shows that relevant research has become more extensive and in-depth and gradually matured in recent years.

Information literacy educators should pay more attention to the latest research results, learn from the latest research results, and find advanced theoretical support and practical experience for the development of information literacy education.

3.2 The research leading countries/institutions

Figure2 Research leading countries or regions

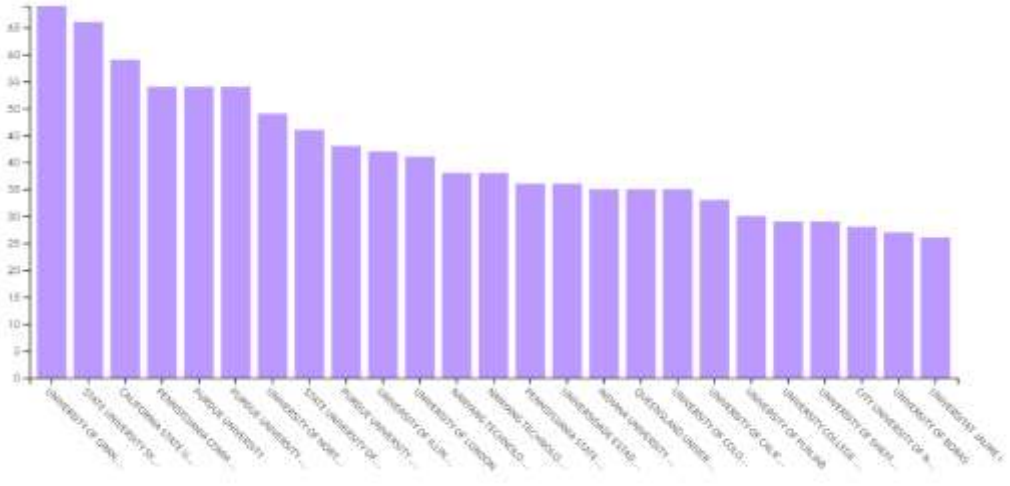

Figure3 Key research institutions

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The concept of information literacy was proposed by American scholars, and the research on information literacy is also based on the research strength of the United States, and the number of published articles occupies a leading position in the world, ranking first in the list, and it is a well-deserved research leading country. Followed by the United Kingdom, Spain, China, Australia, Canada and other countries.

The institutions with more published literature and strong research strength are University of Granada, Florida State University, California State University System, etc. According to the statistics of the country where the institution is located, the US institution occupies an absolute dominant position.

Information literacy educators should pay more attention to the relevant achievements of leading countries and institutions in this field, understand the research progress and direction of information literacy, learn the most advanced theoretical and practical experience, absorb the latest research information and ideas, and draw on and refer to them, so as to inject the freshest blood into information literacy education.

3.3 The important research scholar

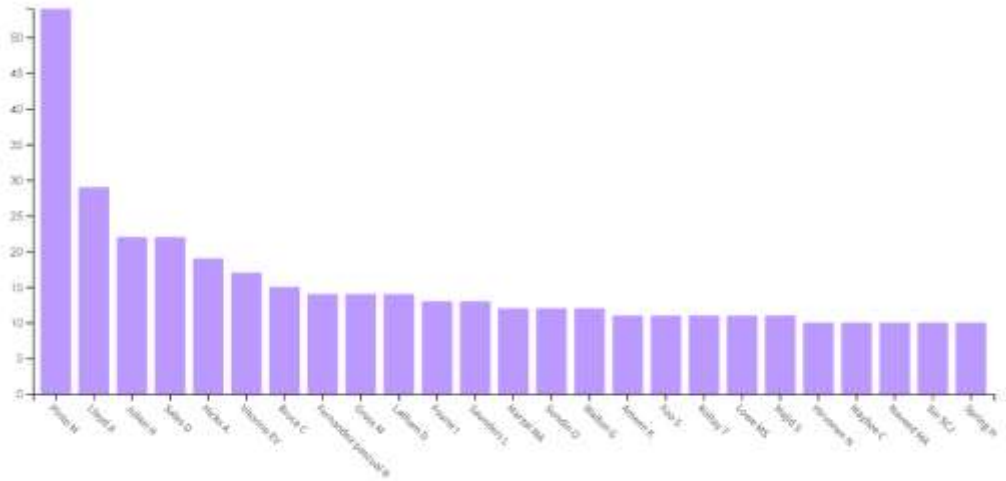

Figure 4 Important research scholar

Understanding scholars and research teams with outstanding research work in a certain field is convenient for quick understanding of new developments in that research field. According to the search results, Mari Pinto from the University of Granada, Spain, ranked 1st in the literature volume and is an important author in the field of information literacy research. His research interests include the conceptual connotation of information literacy, the assessment of information literacy, undergraduate information literacy ability, empirical research on information literacy, information literacy training, and information literacy research in social sciences and health sciences. Among the most prolific scholars in the ranking are Charles J. from Australia Annemaree Lloyd of Stater University, Heidi Julien of the State University of New York, etc.

4. KEYWORD AND CITATION ANALYSIS

4.1 Keyword Analysis

Import the retrieved data into CiteSpace for keyword analysis, and obtain the co-word network diagram as follows.

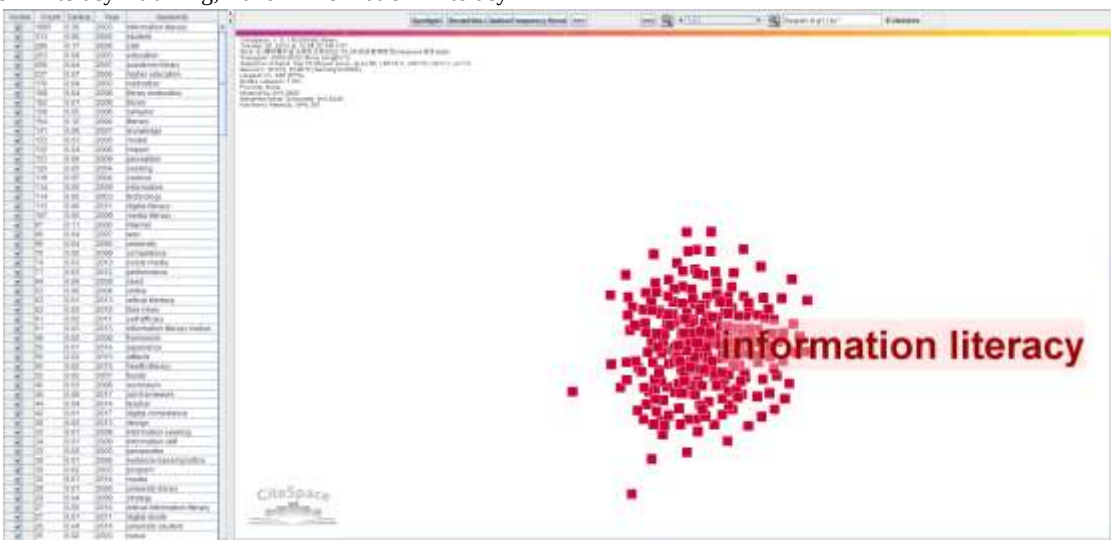

Figure 5 Keyword Analysis

The analysis results show that the most frequent occurrence is information literacy, followed by student, skill, education, academic library, higher education. Information literacy's Centrality metric has the highest value at 0.36, followed by skill and education's Centrality The indicator values are 0.17 and 0.09, respectively. The higher the metric value of Centrality, the greater the importance. The results show that education and skills are currently the most important focus of information literacy research. Therefore, in the practice of information literacy education, especially skills training and education, it is necessary to accelerate the construction of teachers, improve the ability and level of education, and do a good job in related education.

4.2 Citation analysis

In CiteSpace, research frontiers refer to emerging theoretical trends and emerging topics, and co-citation networks form the knowledge base. The analysis of the literature from the perspective of citation can identify the important literature and key literature of the theme research, and depict the overall research context of the theme.

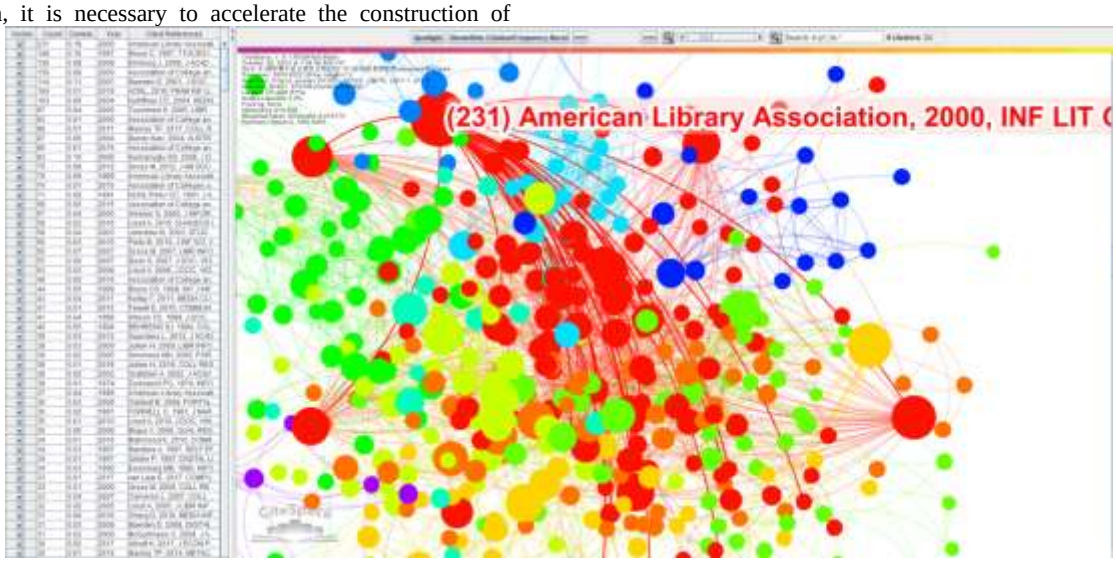

Figure 6 Co-cited network

The Count value represents the number of times the document has been cited. The higher the count value, the more important the literature has a more important academic impact in the research process of information literacy. According to the analysis, the highly cited article on pedagogy is Critical Information Literacy: Implications for Instructional Practice, published by James Elmborg in 2006.This literature uses critical literacy theory to define information literacy. David Bawden's 2001 publication Information and digital literacies: a review of concepts describes and reviews the concepts of information literacy and digital literacy. This paper discusses the concepts of computer literacy, library literacy, and network literacy and explains the relationship between them. What's skill got to do with it?: Information literacy skills and self-views of ability among first-year college students, published in 2012, highlighted students' information literacy skills as an area that educators need to focus on all the time.

5. CONCLUSIONS

With the increasingly extensive and in-depth impact of information technology on all areas of society, the importance of information literacy education has received more and more attention and recognition. At present, the development of information literacy education is not perfect, mainly because people pay insufficient attention to information literacy education, lack of formed information literacy competency standards, teaching models and methods need to be improved, lack of educational capacity and other problems. In practice, systematic information literacy education has not yet been universally developed.

Through the previous data retrieval and visual analysis, we can find the research results and important literature in the field published by important scholars in the research leading countries and institutions and fields in the recent year. It contains the latest research information, subject theory and practical experience. In order to carry out information literacy education smoothly and effectively, relevant educators can focus on drawing theoretical knowledge and experience from these research results, and timely learn and pay attention to the latest research results, development trends and important research literature in related fields. Only by continuously learning the most advanced theory and practical experience can relevant educational work keep pace with the pace of information development.

6. ACKNOWLEDGEMENT

I am very grateful for your help in this study. I would also like to thank all the teachers at the University of the Cordilleras for their education and guidance. Without their teaching, this research would not have been possible.

7. REFERENCES

[1] Wang, X., Wang, Y., Zhu, F., Zhang, C., Wang, P., & Zhang, X. (2021). Effects of Different Land Use Types on Active Autotrophic Ammonia and Nitrite Oxidizers in Cinnamon Soils. Applied and environmental microbiology, 87(12), e0009221. https://doi.org/10.1128/AEM.00092-21

[2] Haiyan Zhu & Haohui Lin(2018).A review of foreign information literacy research in the past 20 years. Lingnan Journal(04),128-132. doi:10.13977/j.cnki.lnxk.2018.04.022.

[3] Huang Lixia &Wang Xinwei. (2021).Research progress on information literacy education for graduate students in China in the past decade. Library Theory and Practice(06),81-86. doi:10.14064/j.cnki.issn1005-8214.20211103.002.

[4] LIU Lihui.(2020). A Literature Review of Research and Practice on Information Literacy Education for Students in American Community Colleges. Shandong Library Journal (03), 91-95

[5] Sha Haiyin & Li Man.(2020). A Review of Research on Information Literacy Education for College Students from the Perspective of Education Informatization 2.0 Jiangsu Higher Vocational Education (01).,105-109+115. doi:10.15903/j.cnki.jniit.2020.01.017.

[6] Chun XU,Jing ZHANG & Zuwei BIAN (2021). Research on the current situation and strategy of online information literacy education in university libraries under the new media environment. Library Research (02), 103-110 .

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Modern Distance Teacher Training in Narrowing the Gap on the Dual Structure Basic Education

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Abstract: With the development of technology, distance education has become an important tool to achieve educational equity. This paper aims to analyze the impact mechanism of modern distance teacher training on narrowing the gap between urban and rural education of China, and put forward a new path to improve the basic education. The research takes the China Education Panel Survey (CEPS) as the data source for analysis and find that the gap between urban and rural basic education does exist, but the academic achievement gap reflected by students at different quantiles is different; Distance teacher training is conducive to improving urban and rural students with different academic performance levels, and it has a higher promotion effect on students with better academic performance in rural areas; Different distance teacher training methods have different effects on students' academic performance, and the effects on mathematics and English subjects are more significant than those on Chinese subjects. Finally, this paper put forward some suggestions for the improvement of modern distance teacher training from the aspects of organization and management, training content, so as to provide a valuable reference for the balanced development of urban and rural education.

Keywords: Distance training; Narrow the gap between urban and rural education; Basic education; Influence mechanism

1. INTRODUCTION

At the beginning of 2019, "China Education Modernization 2035" drew a blueprint for the development of smart campus, digital education resources and artificial intelligence teaching combination based on the development picture of education informatization, which fully reflected the implementation logic from the macro-level education informatization policy to the micro-level to narrow the gap between urban and rural education, and provided a feasible solution to solve the problem of rural education resources [1]. However, how to examine the comprehensive impact brought by the application of information technology based on the practical problems from the microscopic perspective has become a key proposition to be solved urgently at this stage.

At this stage, the academic circles have fully studied the influencing factors related to the differentiation of basic education. Some scholars have calculated the performance of urban and rural basic education in 29 provinces of China through DEA dynamic and static models, and made a prediction before actual intervention to evaluate the basic gap. The results show that this gap does exist, mainly in technological progress and scale efficiency, and the influencing factors involve economic development level, financial freedom, urbanization rate, and poverty level of residents (Yu Xinghou et al., 2019)[2]. Some scholars believe that this gap can be alleviated by improving the distribution of educational resources. Combining distance learning and teaching information technology, we can provide rural teachers with the same educational resources as urban teachers, so that both teachers and students can benefit from the shared educational resources and focus on improving their academic level and educational governance from two aspects: individual internal factors and external environmental factors (Danie, 2021)[3]. At present, there are many ways of distance teacher training, such as online open courses, social network collaborative learning and mobile distance training. These forms have great potential in promoting teachers' quality, improving the quality of learning content, supporting curriculum teaching and improving learning satisfaction. For example, some scholars reported the enthusiasm and application of MOOC in rural areas (Mower, 2016)[4]. Some scholars have pointed out that mobile distance training has the potential to improve academic level, but there is no evidence that this measure can help narrow the gap between urban and rural basic education and provide equal educational opportunities for all (Syahida et al, 2022)[5].

Despite the surging interest in the role of ICT on reforming education, only limited attention has been given on the influence of modern distance teacher training and lack data support. Therefore, this paper uses CEPS data to explore the impact mechanism of on-site distance teacher training on narrowing this gap.

2. The research design and data sources

2.1 The data sources

The research data comes from the benchmark data of "China Education Panel Survey" (CEPS). This survey collected 19,487 students from 28 counties (districts), 112 schools and 438 classes nationwide, and collected information on family and school resources, teacher training status, students' academic achievements and basic characteristics, families and schools, which met the research needs.

2.2 The research methods

Uqr (unconditional quantile regression). In order to explore the influence mechanism of distance teacher training on students with different academic achievements, this paper adopts UQR regression analysis method to carry out research. UQR mainly uses RIF function to transform data, and divides students with different academic achievements into several points, so that we can analyze the differences in the influence of distance teacher training on students at different points. The main formula is as follows:

$$RIF(S, Q_\tau) = Q_\tau + \frac{\tau - I(S \le Q_\tau)}{F_S(Q_\tau)}$$

In the formula, RIF is the reconcentration influence function of distribution statistics, S is academic achievement, Q is unconditional quantile, and I is indicative function.

3. The research results and statistics

According to the research hypothesis and CEPS baseline data, the data results are statistically analyzed, and three research questions are answered: the gap between urban and rural basic education; the influence of distance teacher training on narrowing the gap between urban and rural basic education; and the differential influence of different distance teacher training methods on narrowing the gap between urban and rural basic education.

3.1 The descriptive statistics of related variables

In the two samples of urban schools and rural schools, the frequency of distance teacher training in urban schools is significantly higher than that in rural schools, and the scores of three sciences are also significantly higher than that in rural schools, especially the gap in English academic performance. Compared with urban schools in academic and family levels, the proportion of only children in rural schools and the average educational years of parents are significantly lower, and the proportion of family financial difficulties is higher. At the school level, compared with urban schools, the proportion of teachers with bachelor's degree and teachers who graduated from normal schools is lower, and the proportion of top schools is even 0.

Table 1 Descriptive statistics of related variables

Variable dimension	Variable name	City school	Rural schools	Mean difference
independent variable	Distance teacher training frequency	25.606	14.771	10.835
dependent variable	Weighted Chinese academic achievement	48.443	34.871	13.572
	Weighted mathematics academic achievement	41.779	31.628	10.151
	Weighted English academic performance	49.403	30.395	19.008
Control variable	Student-gender	0.548	0.369	0.179
	Student-Is it an only child?	0.652	0.275	0.377
	Family-economic difficulties	18.20%	30.15%	-11.95%
	Family-economic medium	60.83%	53.50%	7.33%
	Family-economic prosperity	20.98%	16.35%	4.63%
	Family-parent average years of education	12.600	9.492	3.108
	Proportion of school-undergraduate teachers	0.865	0.649	0.216
	Proportion of school-teacher graduates	0.899	0.667	0.232
	School-backward in ranking	16.42%	29.91%	-13.49%
	School-ranked medium	54.16%	70.09%	-15.93%
	Schools-Top ranked	29.42%	0.00%	

Source: The benchmark data of China Education Tracking Survey (CEPS) project;

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	Family-economic prosperity	20.98%16.35%	16.35%/Family-parent average years of education12.6009.4923.108Proportion of school-undergraduate teachers0.8650.6490.216Proportion of school-teacher graduates0.8990.6670.232School-backward in ranking16.42%29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	/Family-parent average years of education12.6009.4923.108Proportion of school-undergraduate teachers0.8650.6490.216Proportion of school-teacher graduates0.8990.6670.232School-backward in ranking16.42%29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;
	Family-parent average years of educati	12.600	9.4923.108Proportion of school-undergraduate teachers0.8650.6490.216Proportion of school-teacher graduates0.8990.6670.232School-backward in ranking16.42%29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	3.108Proportion of school-undergraduate teachers0.8650.6490.216Proportion of school-teacher graduates0.8990.6670.232School-backward in ranking16.42%29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;

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	0.8990.6670.232School-backward in ranking16.42%29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	0.8990.6670.232	0.6670.232School-backward in ranking16.42%29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	0.232School-backward in ranking16.42%29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;
	29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	16.42%29.91%	29.91%/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	/School-ranked medium54.16%70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;
	70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	54.16%70.09%	70.09%/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	/Schools-Top ranked29.42%0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;
	0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	29.42%0.00%/	0.00%/Source: The benchmark data of China Education Tracking Survey (CEPS) project;	/Source: The benchmark data of China Education Tracking Survey (CEPS) project;

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Source: The benchmark data of China Education Tracking Survey (CEPS) project;

Note: Student-sex (male -1, female-0); Student-Is it an only child (Yes -1, No -0)

3.2 The gap between urban and rural basic education

This paper explains the gap between urban and rural students at different points through the distribution of their academic achievements. Descriptive statistical results show that compared with urban students, rural students' weighted academic achievements in Chinese, mathematics and English lag behind urban students as a whole, which is similar to previous research results.

3.3 The impact of distance teacher training on narrowing the gap between urban and rural basic education

In this paper, UQR regression analysis is used to measure the influence mechanism of distance teacher training on the academic achievement gap between urban and rural students at different points, as shown in Table 2.

Table 2 UQR measurement results of distance teacher training in narrowing the gap between urban and rural basic education

subjectUrban studentsRural studentquantile; fractileQ30Q60Q90Q30Q60Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.				Urban studentsRural studentquantile; fractileQ30Q60Q90Q30Q60Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.		Rural studentquantile; fractileQ30Q60Q90Q30Q60Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.
quantile; fractileQ30Q60Q90Q30Q60Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	Q30Q60Q90Q30Q60Q90Chinese0.164*0.443**	Q60Q90Q30Q60Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics0.173**0.314**0.520**0.126*0.424**	Q90Q30Q60Q90Chinese0.164*	Q30Q60Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	Q60Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics	Q90Chinese0.164*0.443**0.533*0.859***0.144*0.445**mathematics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.
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thematics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	thematics0.173**0.314**0.520**0.126*0.424**	tics0.173**0.314**0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.		.314**0.520**		
mathematics0.173**0.314**0.520**	0.173**0.314**	0.314**0.520**	0.520**0.126*0.424**0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	0.126*0.424**	0.424**0.597*	0.597*English0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.
English0.291**0.544*0.437*0.749**	0.291**0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	0.544*0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	0.437*0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	0.749**0.580**0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.	0.580**0.982*	0.982*Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.

Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.

From Table 2, it can be seen that students' academic achievements are distributed in three quantiles, namely Q30, Q60 and Q90, which can all be improved through distance teacher training, and with the improvement of quantiles, the promotion of distance teacher training to students' academic achievements is gradually enhanced. In other words, distance teacher training can improve students' academic performance, but it does not mean that the gap between urban and rural education can be narrowed under the same distance training frequency. In addition, distance teacher training has a stronger promotion effect on students with good academic performance, but not on students with poor academic performance.

3.4 The differentiated effects of different distance teacher training methods on narrowing the gap between urban and rural basic education

This paper sorts out different distance teacher training methods, and divides them into three categories: open courses, social networks and mobile internet, and reveals the explanatory power of different distance teacher training methods in narrowing the gap between urban and rural basic education, as shown in Table 3.

Table 3 UQR measurement results of different distance teacher training methods to narrow the gap between urban and rural basic education

			Urban studentsRural studentQ30Q60Q90Q30Q60Q90ChineseOpen courseestimated value1.271**1.355*1.042**1.013**1.267***1.034**Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%8.11%			Rural studentQ30Q60Q90Q30Q60Q90ChineseOpen courseestimated value1.271**1.355*1.042**1.013**1.267***1.034**Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%8.11%		
subjectTraining categoryestimated value	Training categoryestimated value	estimated value/explanatory powerUrban studentsRural studentQ30	Q30Q60Q90Q30Q60Q90ChineseOpen courseestimated value1.271**1.355*1.042**1.013**1.267***1.034**Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%	Q60Q90Q30Q60Q90ChineseOpen courseestimated value1.271**1.355*1.042**1.013**1.267***1.034**Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%	Q90Q30Q60Q90ChineseOpen courseestimated value1.271**1.355*1.042**1.013**1.267***1.034**Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%	Q30Q60Q90ChineseOpen courseestimated value1.271**1.355*1.042**1.013**1.267***1.034**Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%	Q60Q90ChineseOpen courseestimated value1.271**1.355*1.042**1.013**1.267***1.034**Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%	Q90Chinese
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		Explanatory power12.14%14.99%5.02%5.72%3.29%6.78%	12.14%14.99%5.02%5.72%3.29%6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	14.99%5.02%5.72%3.29%6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	5.02%5.72%3.29%6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	5.72%3.29%6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	3.29%6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	6.78%Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%
	Social networkestimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	estimated value1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	1.038**1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	1.563**2.955**1.832**1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	2.955**1.832**1.327*	1.832**1.327*1.830**	1.327*1.830**Explanatory power15.04%11.15%12.98%7.45%	1.830**Explanatory power15.04%11.15%12.98%7.45%
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1931.5051.	1931.5051.	874**Expla	874**Expla
874**Expla	874**Expla	natory	natory
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power20.23	power20.23	%15.54%23	%15.54%23
%15.54%23	%15.54%23	.02%10.07	.02%10.07
.02%10.07	.02%10.07	%9.24%5.1	%9.24%5.1
%9.24%5.1	%9.24%5.1	1%mathem	1%mathem
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aticsOpen	aticsOpen	courseestim	courseestim
courseestim	courseestim	ated	ated
ated	ated	value1.424*	value1.424*
value1.424*	value1.424*	*2.858**2.	*2.858**2.
*2.858**2.	*2.858**2.	211**1.865	211**1.865
211**1.865	211**1.865	**2.518**2	**2.518**2
2.5182	**2.518**2	.466**Expl	.466**Expl
.466**Expl	.466**Expl	anatory	anatory
anatory	anatory	power10.22	power10.22
power10.22	power10.22	%18.61%20	%18.61%20
%18.61%20	%18.61%20	.50%15.71	.50%15.71
.50%15.71	.50%15.71	%17.05%25	%17.05%25
%17.05%25	%17.05%25	.93%Social	.93%Social
.93%Social	.93%Social	networkesti	networkesti
networkesti	networkesti	mated	mated
mated	mated	value2.435*	value2.435*
value2.435*	value2.435*	*1.944*0.9	*1.944*0.9
*1.944*0.9	*1.944*0.9	96***1.797	96***1.797
96***1.797	96***1.797	**1.078**2	**1.078**2
1.0782	**1.078**2	.125*Expla	.125*Expla
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.98%16.80	.98%16.80	%15.97%12	%15.97%12
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.10%Mobil	.10%Mobil	e	e
e	e	Internetesti	Internetesti
Internetesti	Internetesti	mated	mated
mated	mated	value1.615*	value1.615*
value1.615*	value1.615*	*1.224*2.3	*1.224*2.3
*1.224*2.3	*1.224*2.3	21**2.198*	21**2.198*
21**2.198*	21**2.198*	*1.540**0.	*1.540**0.
*1.540**0.	*1.540**0.	941**Expla	941**Expla
941**Expla	941**Expla	natory	natory
natory	natory	power14.74	power14.74
power14.74	power14.74	%20.33%10	%20.33%10
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.18%21.89	.18%21.89	%25.35%18	%25.35%18
%25.35%18	%25.35%18	.88%Englis	.88%Englis
.88%Englis	.88%Englis	hOpen	hOpen
hOpen	hOpen	courseestim	courseestim
courseestim	courseestim	ated	ated
ated	ated	value2.484*	value2.484*
value2.484*	value2.484*	*1.685*1.1	*1.685*1.1
*1.685*1.1	*1.685*1.1	24*1.613*1	24*1.613*1
24*1.613*1	24*1.613*1	.969*1.430	.969*1.430
.969*1.430	.969*1.430	***Explana	***Explana
***Explana	***Explana	tory	tory
tory	tory	power12.50	power12.50
power12.50	power12.50	%20.31%18	%20.31%18
%20.31%18	%20.31%18	.28%19.14	.28%19.14
.28%19.14	.28%19.14	%31.56%34	%31.56%34
%31.56%34	%31.56%34	.86%Social	.86%Social
.86%Social	.86%Social	networkesti	networkesti
networkesti	networkesti	mated	mated
mated	mated	value1.624*	value1.624*

				value1.624*	value1.624*		
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Source: The benchmark data of China Education Tracking Survey (CEPS) project; Note: * means P<0.1; * * means P<0.05; * * * means P<0.01.

From Table 3, it can be seen that the frequency of distance training for rural teachers is significantly lower than that of urban teachers, and the efficiency of transforming students' academic performance into improvement is not as good as that of urban students. Specifically, there are significant differences in the effects of different distance training methods on the academic performance of urban and rural students, and this difference is also heterogeneous in different disciplines and different points. For example, in the Q90 scores of urban students, the explanation of open courses, social networks and mobile internet for the improvement of students' academic performance in mathematics and English is significantly higher than that for the improvement of Chinese academic performance.

4. CONCLUSIONS

First, the gap between urban and rural basic education does exist, but the academic achievement gap reflected by students at different quantiles is different. First of all, urban students' scores in Chinese, mathematics and English at any score point are significantly higher than their corresponding rural students; Secondly, the gap between urban and rural students' academic performance has gradually widened with the increase of the scores; Finally, the academic gap between urban and rural students is heterogeneous in different disciplines, that is, the academic performance of English is generally greater than that of Chinese and mathematics. It can be concluded that the academic achievement gap between urban and rural students is particularly prominent among those with better academic achievements, and it is mostly reflected in English subjects.

Secondly, distance teacher training is beneficial to improve urban and rural students with different academic performance levels, and it has a higher promotion effect on students with better academic performance in rural areas, rather than those with poor academic performance in rural areas. On the one hand, the influence of distance teacher training on the gap between urban and rural students is consistent, and the same training frequency is helpful to improve students' academic performance; On the other hand, in the academic performance of rural students, the positive effect of distance teacher training on students in Q90 is significantly higher than that of students in Q30 and Q60, that is, distance teacher training can not bring significant positive effects to rural students with lower academic performance. It can be concluded that distance teacher training can promote the academic performance of urban and rural students, and the effect on urban students is significantly higher than that on rural students at the same training frequency, so it cannot be directly explained that distance teacher training can narrow the gap between urban and rural education, and further research is needed to verify this conclusion.

Thirdly, the effects of different distance teacher training methods on students' academic performance are different, and the effects on mathematics and English subjects are more significant than those on Chinese subjects. First of all, according to the different characteristics of urban and rural student groups, we should adopt differentiated distance teacher training methods, so as to achieve better results; Secondly, for teachers of different disciplines, we should also adopt differentiated distance teacher training methods. On the whole, the training effect of open courses is significantly higher than that of social networks and mobile internet; Finally, at different points, different distance teacher training methods have different explanations for improving students' academic performance, so different training methods should be adopted according to students' academic level. From this, we can draw a conclusion: when developing distance teacher training, we should dynamically apply open courses, social networks and mobile internet training methods according to students' academic level and different subject categories.

5. REFERENCES

[1] Gu Mingyuan, Teng Jun. China's Education Modernization 2035 and the realization of global Sustainable Development education goals [J]. Comparative Education Research, 2019,41 (05): 3-9 + 35.

[2] Yu Xinghou, Chu Yong, Xiong Xing, Wang Yamei. Where is the lower performance of basic education in rural areas than in urban areas in China? —— The new evidence based on the two-stage DEA-truncated analysis [J]. Modern Education Management, 2019 (07): 14-21.

[3] Young Daniel,Real Francis J,Sahay Rashmi D,Zackoff Matthew. Remote Virtual Reality Teaching: Closing an Educational Gap During a Global Pandemic [J]. Hospital pediatrics,2021,11(10).

[4] DeeDee Mower. Deviance to Diminish Educational Disparity[J]. Social Philosophy Today,2016,32.

[5] Mohtar Syahida, Jomhari Nazean, Mustafa Mumtaz Begum, Yusoff Zulkifli Mohd. Mobile learning: research context, methodologies and future works towards middle-aged adults - a systematic literature review. [J]. Multimedia tools and applications,2022.

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Risk Identification and Effective Safety Management Strategy Exploration in Tourism Process Based on Risk Chain Analysis

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Abstract: Effective tourism safety risk prevention and control can reduce the incidence of tourism safety accidents, so that tourism enterprises and tourists can avoid losses caused by tourism safety accidents. Based on the concept of risk chain proposed by Merkhofer, the causes of tourism safety accidents were analyzed, and the model of accident causation chain was constructed, and it was pointed out that the ideas of tourism safety risk prevention and control can be divided into three types: risk avoidance, risk prevention and risk reduction. Therefore, to better protect the life and property safety of tourists, we should fully consider and understand the safety risk factors that may be encountered during the travel itinerary, improve travel safety awareness, and learn and master travel safety risk prevention and control methods and coping skills.

Keywords: Risk identification, effective safety, strategy exploration, tourism process, risk chain analysis

1. INTRODUCTION

The security risks in tourism activities are analyzed, and effective prevention and control countermeasures are put forward. It is an introduction to tourism security, which mainly discusses security issues in tourism behavior, including the definition of modern tourism, the definition of tourism security, and an overview of tourism security. They discuss the relationship between tourism security and tourism economy, emphasizing the lack of Safety guarantees will make it difficult to develop the tourism economy. At present, there are relatively few studies on exchange students' study tours, and there are also insufficient studies on the risk perception of exchange students' study tours. Liang Jian used the principal component analysis method to study the influencing factors of overseas students studying and traveling in Chongqing, Yi-HsinLin et al. conducted a questionnaire survey and research analysis on 151 Chinaese students' overseas work and study motivation, travel risk and travel satisfaction.

With the vigorous development of tourism to China, the problem of tourism safety has become more prominent, and with the further development of exchange student activities, research on the risk perception of exchange students studying in China will have a certain reference for future research on related academic issues. At the same time, it will play a certain guiding role in the development of cross-strait student exchange activities and the management of exchange students in the future. Domestic research on tourism safety began in the 1990s. For example, Yang Jianyuan first made a systematic analysis of the current situation and problems of domestic tourism safety management. The period from 2003 to 2010 was the outbreak stage of domestic tourism safety research, and domestic literature was relatively concentrated on the basic theory of tourism safety, tourism safety guarantee system, and research on crisis management of tourism enterprises.

From 2011 to 2012, the research on tourists' risk perception and education increased, which is related to the rise of adventure tourism and self-help tourism. At present, there is no uniform definition of the concept of study tour. Huang Ling believes that study tourism refers to cultural tourism activities that tourists temporarily leave their permanent residence and carry out cultural tourism activities in other places out of the need for cultural knowledge. Tourists can enrich and expand their knowledge level by learning and researching a certain topic culture, adjust their knowledge structure, improve their own cultural accomplishment, and adapt to the cultural needs of the society. Tourists should take the initiative to understand the risk factors of tourism safety and master the corresponding Safety prevention and control measures.

Because tourists are not familiar with the situation of tourist destinations, they are easy to encounter some unexpected risks. Tourism safety management requires tourists to have safety risk awareness and master corresponding safety prevention and control skills. For example, tasting special delicacies is one of the key points of tourists' travel itinerary. The risks that tourists face when tasting local delicacies mainly include food safety risks and food price risks. Risk analysis through accident causes is a relatively effective risk analysis method. Accidents are usually caused by the unstable state of objects and people. The first to put forward this point of view is Heinrich. According to Heinrich's domino theory, when the five factors act in sequence, an accident that should have been under control will occur and cause injury.

2. THE PROPOSED METHODOLOGY

2.1 Risk Chain Analysis of Tourism Safety Accidents

These five factors are the development of social environment, personnel problems, risk of unsafe acts or things, accident occurrence, injury or sustained damage caused by accident. Tourists can try to choose regular gourmet stores to taste food, which can improve food safety; as for food price risks, tourists can try to choose to buy products with clearly marked prices and ask clearly about the price and unit (including currency unit and weight unit) before ordering food. Even if you encounter price gouging, you should remain calm, reason first, and if you fail to reason, you must retain evidence, seek help from the local market management department and law

enforcement department, protect your legitimate rights and interests, and do not conflict with the locals.

Risk chain analysis provides three ideas for risk prevention and control. The first is risk avoidance, that is, eliminating sources of danger and avoiding things that will increase risks in advance, including personnel, assets, and behaviors. For example, there is an amusement park in the city that has been in operation for a long time. During the security inspection, it was found that many amusement facilities in the amusement park have serious safety hazards. The government then decided to close the amusement park, and the site where the amusement park was located was transformed into an urban leisure park. This way of doing this in this case is to completely abandon this risky thing (source), the ride in question. Controversy often arises when adopting this approach. The Bartlett sphericity test was used to examine the correlation between variables. The KMO value of the scale is 0.873, and the Bartlett sphericity test value is 1822.368, which are significantly correlated at the 0.01 significance level, indicating that there are common factors among the correlation matrices of tourism risk perception description items, which are suitable for factor analysis.

According to the initial factor analysis results obtained by the Principal Component Method (Principal Component Method), the extracted common factors were rotated by the orthogonal rotation method of variance maximization, and five main common factors of tourism risk were extracted. Tourists should pay attention to travel safety information and try to avoid safety risk factors in tourist destinations. The governments and media of various countries will release tourism safety information according to the actual situation of the tourism market for tourists' reference. For example, Dubai, Jerusalem, and other internationally renowned tourist cities in the Middle East are popular tourist destinations for many travel enthusiasts. However, the situation in the Middle East is turbulent. If tourists want to choose tourist cities in the Middle East as tourist destinations, Timely attention should be paid to the travel safety reminder information issued by the national government and international tourism agencies. If there are many travel safety risk factors that are uncontrollable, try to change the travel destination. The installation of smoke alarm systems in hotels is a measure of risk reduction. The interaction of hazard sources and the environment ignites flammable materials, and the smoke alarm system begins to respond, thereby reducing the ultimate loss and impact of the fire. Contingency plans and emergency facilities are both approaches to risk reduction.

2.2 Measures to prevent and control tourism safety risks

Another method of risk reduction is "risk transfer". Risk transfer refers to the transfer of all or part of the risks faced to another party through a certain arrangement, and the reduction of risk losses is obtained through the transfer of risks. Insurance is a very typical method of risk transfer. There are significant differences in personal safety risks, so it can be speculated that exchange students with different professional backgrounds have relatively different perceptions of political risks in different regions of China, and exchange students in different regions have different risk perceptions of natural disasters. There are differences, which may be related to the different frequency of natural disasters in different regions of China. From the overall analysis, there are differences in the risk perception level of exchange students with different demographic characteristics and travel experience, but the differences are different in different dimensions.

If you must go to the tourist destination for some reason, you can choose to go after the local social situation is relatively stable, which can improve the safety factor of tourism. In addition, corresponding tourism risk prevention plans should be prepared in advance according to tourism safety risk factors, such as remembering the phone number of the local embassy in the local country, paying attention to respecting the customs of the local people, and refraining from rude or unfriendly behaviors, etc., to be more Safeguard the travel safety of yourself and your relatives and friends. The emergency plan is aimed at specific equipment, facilities, places, environment, and activities, based on the safety evaluation, to reduce the personal, property and environmental losses caused by accidents, to ensure rapid, orderly, and effective emergency and rescue operations, control accident development, scientific and effective plans and arrangements made in advance. Tourism safety risk emergency plan is an effective way to reduce risk losses.

Through exploratory research such as scale design, questionnaire survey, and factor analysis, this study analyzes the risk perception of exchange students for study and travel. Personal safety risk, social psychological risk, cultural conflict risk, and public health risk. Among them, dysfunctional risk is a more prominent risk type. Through the difference analysis, in terms of gender, educational background, the area where the exchange school is in China, and other demographics and travel experience, there are differences in the level of risk perception among different exchange students. According to the accident causal chain model, the defects in the safety management system of tourism enterprises are the important factors causing accidents. The safety management of tourism enterprises comes from all aspects of enterprise management.

Running an effective management system encourages employees to develop safe habitual behaviors and promotes the construction of a safety culture. At the same time, a safety culture is also conducive to the construction of a safety management system. When the safety management system is constructed, it will respond to the requirements of laws and regulations, and identify risks in the external and internal environments, so the safety management system must be a dynamic system.

3. CONCLUSION

With the changes in the tourism industry, the prevention and control measures for tourism safety risks should also be adjusted and upgraded according to actual needs. First, corresponding regulatory measures should be introduced for new types of business, such as mountaineering clubs, tourism e-commerce platforms, etc., and improve the management of high-risk tourism projects. To formulate regulations and standards and improve the intensity of supervision, third-party evaluation and qualification granting can be used to form a regulatory atmosphere. At the same time, there is also the problem of small sample size. Due to the diversity of factors that affect tourism risk perception, in future research, the demographic characteristics of exchange students can be combined, and under the condition of sufficient sample size, the spatial distribution of exchange students' perception of travel risk can be focused on for further verification.

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5. REFERENCES

[1] Li Yingfen. Research on Risk Management of KLG Scenic Area Project [D]. Dalian Maritime University, 2017. DOI: CNKI: CDMD: 2.1018.058314.

[2] Gu Jun. Research on Risk Management of Ningbo Meishan Blue Sea Leisure Island Tourism Project [D]. Zhejiang University of Technology [2023-06-13].

[3] Zhang Yan, Zhang Jianxin, Liu Peixue, et al. Identification and Difference Analysis of Risk Perception Dimensions and Differences of Mainland Exchange Students Studying and Traveling in China [J]. Journal of Shandong Normal University: Natural Science Edition, 2015, 30(4):6.DOI: 10.3969/j.issn.1001-4748.2015.04.027.

[4] Xiao Yongjun. Research on Risk Management of Tourism Destination Development Projects [D]. Wuhan University of Technology [2023-06-13]. DOI: 10.7666/d.y1559728.

[5] Du Chunyan. Research on Urban Tourism Risk and Its Management Process——Taking Guilin City as an Example [D]. Guilin University of Technology, 2011. DOI: 10.7666/d.y1941229.

[6] Wang Zheng. Research on Risk Management and Countermeasures of PPP Projects [D]. Shenyang Jianzhu University, 2019.

[7] Xu Xinran. Exploration of Risk Identification and Effective Safety Management Strategies in the Tourism Process——Comment on "Travel Safety Management: Strategies for Effectively Managing Travel Risk and Safety" [J]. Chinese Journal of Safety Science, 2021.

[8] Hou Dunfu. Research on Risk Management System of Tourism Enterprises [D]. Shenyang Aerospace University, 2011.

[9] He Shan. Research on Life Cycle Risk Management of Tourism Real Estate Projects [D]. Anhui Jianzhu University, 2016.

[10] Chen Xingjian. Research on risk management of tourism development projects in Baoxing County [D]. Southwest Jiaotong University, 2010. DOI: CNKI: CDMD: 2.2009.219076.

[11] Zeng Yan. Talking about the Identification and Response of Investment Risks of Leisure and Holiday Tourism Projects [J]. China Business Circle, 2009(5X):2.DOI:CNKI:SUN:JSGZ.0.2009-05-060.

[12] Jiang Zhe. Research on Risk Assessment of Yunmenshan Ecotourism Development Project in Qingzhou City [D]. Ocean University of China [2023-06-13].

[13] Cai Qing. Research on Perceived Risk and Consumer Behavior of Online Travel Booking [D]. 2011. DOI: http://dspace.xmu.edu.cn:8080/dspace/handle/2288/33069.

[14] Zhang Xiaoyue, Zhan Li. Regional Tourism Risk Assessment Based on Uncertain Measures: Taking Enshi, Hubei as an Example[J]. 2015.

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The Path and Countermeasures of Sustainable Development of Rural Tourism in The Era of "Internet +"

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Abstract: In recent years, rural tourism has become one of the most popular ways of traveling. To further improve and promote the development of this tourism model, the technology and correct use of the Internet can play a positive role. Through the Internet, tourism transformation and product upgrading can be realized, publicity efforts can be improved, and high-quality services can be provided. Based on some problems in the rapid development of rural tourism in China, this paper proposes rural tourism development strategies in the "Internet +" era. The path of sustainable development in the future.

Keywords: path and countermeasures, sustainable development, rural tourism, Internet +

1. INTRODUCTION

At present, with the development of the whole country, our country has entered the stage of mass tourism. On the one hand, this has played a role in promoting the rapid development of rural tourism. On the other hand, due to the lack of concept of operators and blind competition, many villages blindly imitate other ancient towns that have taken the lead in the development of tourism, resulting in serious homogeneous development of rural tourism, with similar products and services in different regions and lack of characteristics.

Since rural tourism now accounts for an increasing proportion of my country's tourism industry, problems in rural tourism are discovered and solved in a timely manner, and the organic combination of the Internet and rural tourism is promoted. How to promote the sustainable development of rural tourism has become the future of rural tourism. Development problems need to be solved.

Therefore, this article will start from the reality of rural tourism in my country, take Shanxi Province as an example, analyze the problems existing in the development of rural tourism today, and propose how to use the combination of "Internet +" and rural tourism to promote the sustainable development of rural tourism. The unique cultural heritage of the countryside is the lifeline for the sustainable and healthy development of rural tourism. "Staying in a homestay, eating farm meals, doing farm work, enjoying farm customs, and enjoying farm pleasure" should be the standard configuration of rural tourism, but in fact, many rural tourisms in In the process of development, the problem of over-commercialization appeared. They ignored the original natural landscape and unique culture of the countryside, and instead imitated the cities to build a series of leisure and entertainment venues, which greatly compromised the original ecological rural culture. If rural tourism continues to follow this unhealthy growth path, it will eventually decline. Online services are advocated in the era of the Internet economy, and it is also necessary to establish an 020-marketing model and management interaction model in rural areas. Rural tourism is the main trend of leisure tourism in the future. The government and relevant departments should realize the importance of this emerging industry and establish a new online and offline joint development model.

Starting from the needs of tourists, combined with local characteristics, to meet more tourist experience. Compared with the traditional model, the online model is richer, and can provide a booking model for products and services, making the price more transparent, so it is easier to get the recognition of tourists. Local characteristic products can be promoted through the network marketing model, and the overall development of rural tourism can be promoted. Goes deep into the grassroots and strives to promote the sustainable development of rural tourism from all aspects. Relevant government departments should start from all aspects to help rural tourism flourish. First, use the network platform to provide targeted training and guidance to rural tourism management personnel, focus on improving the basic quality of employees, and then improve the overall service level.

2. THE PROPOSED METHODOLOGY

2.1 Sustainable Development Path of Rural Tourism in the "Internet +" Era

To create a "smart village", each village must establish a smart tourism rural service platform to realize online integrated services throughout the tourism process. Due to the backwardness of the rural conditions, the government should provide some technical support during the development process to help realize WiFi or data networks in scenic spots. full coverage. The third is to carry out product and service innovation with Internet thinking and help create characteristic rural tourism enterprises based on the unique local cultural heritage and natural landscape. The fourth is to change the traditional concept of tourism development through publicity and education, improve the awareness of environmental protection and sustainable development, and create "green tourism" and "eco-tourism". Rural tourism in our country is now basically based on ecological agricultural viewing, combined with some simple agricultural production experience, especially now that some original ecological market economies have gradually added to cities, which disperses tourists in rural tourism source. In addition, due to the influence of seasonal characteristics of crops, rural tourism not only cannot meet the needs of the urban population, but also causes serious damage to the ecological environment of the countryside and makes it difficult to get a respite.

In terms of tourism additional products, they are often uniformly customized on the Internet, lacking local characteristics of tourism, unable to attract tourists' attention, and the degree of market development will also be affected. Rural tourism in Shanxi Province is mostly based on local characteristic culture and human history. How to create products with cultural characteristics is also one of the ways to enhance the competitiveness of rural tourism in Shanxi Province. Rural tourism can cooperate with local vocational colleges. Vocational colleges set up relevant majors according to local needs, create targeted talent training models, implement school-enterprise cooperation, and strengthen vocational college students' participation in rural tourism enterprise internships. A group of urgently needed rural tourism counterparts. Of course, it also brings new challenges. This requires Internet companies to further create new products and improve innovation capabilities. They can adopt diversified methods, such as creating cultural models, and perfectly combining cultural features or local natural landscapes or cultures.

Establish a common information platform for rural tourism, improve and innovate its system, make the service system such as farmhouse more humane, create a one-stop tourism service for tourists, and promote its sustainable development. The first is the environmental protection system, which can be established by Relevant departments conduct environmental monitoring, protect the ecological environment, and implement green development. The second is the medical and health security system, which provides comprehensive and timely medical and health services for tourists, such as opening online medical services and setting up medical and health stations. The third is the transportation security system, the transportation department needs to cooperate vigorously to ensure the travel safety of tourists while ensuring the efficiency of tourism transportation. The fourth is the information use guarantee system. Information security is extremely important in the Internet age. Villages should ensure network security to ensure the information security of tourists and avoid information leakage. Since rural tourism is a tourism model independently operated by farmers, farmers do not use electronic equipment enough. Traditional slogans or word of mouth are often used in the promotion of rural areas, which makes the number of people who understand it insufficient. The tourist flow is not enough to support the further development of rural tourism.

2.2 Sustainable Development Strategy of Rural Tourism in the "Internet +" Era

From the beginning of the development of the rural tourism economy to the present, the rural tourism in Shanxi Province is also constantly improving, but it is affected by various factors during the development process and restricts the transformation and upgrading of rural tourism. Rural tourism needs more standardized and reasonable management and development. Provide personalized and diversified rural tourism experience for tourists. The emergence of the Internet has brought huge changes to all sectors of society. In terms of rural tourism, based on Internet thinking, we can create emerging smart tourism products that integrate characteristic rural cultural heritage, develop tourism APPs, and provide online landscape previews, marketing, and payment. And a series of services to meet the individual needs of customers to the greatest extent. Although rural tourism has been recognized by many people, its publicity, especially the effect of Internet publicity, is not ideal. On the one hand, the lack of relevant talents has resulted in insufficient publicity. On the other hand, there is insufficient investment in funds, and the Internet's entry into rural areas is hindered by many factors. To this end, it is necessary to strengthen the promotion of the Internet and promote it as a means of building the first rural tourism brand. A new model of rural Internet marketing will be launched, and the price of tourism products will be closely integrated with the local natural scenery, folk culture, and product resources. Improve marketing efforts through resource integration. Uniqueness is the guarantee for the sustainable development of rural tourism. In the Internet age, there are various ways of publicity and marketing. It is not marketing but the product itself that restricts the development of rural tourism. If you want to win the favor of tourists in the highly competitive tourism market, you must work hard on the characteristics. This requires in-depth excavation of rural culture and folk customs to create an irreplaceable rural tourism experience.

The government should grasp the dominant position of rural tourism and formulate the standardization of the overall operation system and methods of rural tourism. First, the government should provide strong economic and policy support for rural tourism, improve the lack of information in rural tourism by investing funds, carry out informatization construction of rural tourism, and make rural tourism develop into smart tourism. Secondly, the government should also do a good job in the overall construction of infrastructure in the rural tourism areas under its jurisdiction, and make overall improvements in terms of sanitation environment, traffic control, green environment, and network foundation. In addition, the government should make full use of the convenience of the Internet to monitor the rural tourism economy and disperse passenger flow and apply GPS and other advanced technologies on vehicles to effectively control the personal safety of tourists. The first is the environmental protection system, which can be monitored by relevant departments to protect the ecological environment and implement green development. The second is the medical and health security system, which provides comprehensive and timely medical and health services for tourists, such as opening online medical services and setting up medical and health stations.

The third is the traffic guarantee system. The traffic department needs to cooperate vigorously to ensure the travel safety of tourists while ensuring the efficiency of tourist traffic. It can also use mobile APP, Sina, Netease, WeChat, Weibo, and other perfect platforms to expand marketing channels and make marketing and publicity system is more perfect. Set up a rural tourism SNS community to provide interactive functions for netizens, making tourist attractions a topic of daily discussion. In the modern era of multimedia and Internet technology development, virtual technology can also be combined with the tourism industry to increase user experience. In short, under the Internet, we should develop multi-modes of rural tourism to ensure better publicity of tourism, make it more local, and promote its development and progress.

3. CONCLUSION

Due to the increasing competition in the market economy, the "Internet +" proposed under the new situation has gradually become the fresh vitality of my country's economic development, promoting the rapid transformation of my country's traditional economy. Rural tourism should seize the opportunity of the Internet to integrate into the industry in its own development, constantly supplement and improve rural tourism through Internet wisdom, help rural tourism to

upgrade its quality and model, and make rural tourism healthy and sustainable with the help of the Internet. Sustainable development, committed to improving product innovation, product quality and service quality, but we must also see that there are still obstacles in the combination of the Internet and rural tourism, which needs to be analyzed and managed from various aspects to ensure its overall development and standardization develop. Realize the sustainable development of my country's rural tourism, and then drive the economic development of my country's rural areas.

4. REFERENCES

[1] Ma Jie. The Sustainable Development Path and Countermeasures of Rural Tourism in the "Internet +" Era [J]. China Business Theory, 2019(18): 2.DOI: 10.19699/j.cnki.issn2096-0298.2019.18.060.

[2] Yan Xiaohua. Discussion on the sustainable development path of rural tourism in the "Internet +" era [J]. Southern Agricultural Machinery, 2018, 49(4):1.DOI:10.3969/j.issn.1672-3872.2018.04.141.

[3] Lu Zhibin. Paths and Countermeasures for the Sustainable Development of Rural Tourism in the "Internet +" Era [J]. Cooperative Economy and Technology, 2018(16):2.DOI:CNKI:SUN:HZJJ.0.2018-16-018.

[4] Zhang Xili. Research on the Path of Sustainable Development of Rural Tourism in the "Internet +" Era [J]. Shanxi Agricultural Economics, 2018(14):2.DOI:CNKI:SUN:SDNJ.0.2018-14-005.

[5] Zhang Yinghua. Discussion on the development and path of rural tourism in the construction of new countryside [D]. Shenyang Jianzhu University, 2019.

[6] Chen Yang, Wang Fuxi, Zhang Wei, et al. Research on Rural Tourism Development in Feicheng City from the Perspective of Global Tourism [J]. Land and Natural Resources Research, 2019(4):4.DOI:CNKI:SUN:GTZY. 0.2019-04-028.

[7] Liang Zheng. Paths and countermeasures for the sustainable development of rural tourism in the "Internet +" era [J]. Tourism Overview Monthly, 2018, 285(12): 28.

[8] Time. The path and countermeasures for the sustainable development of rural tourism in the "Internet +" era [J].[2023-06-11].

[9] Li Junlou, Zhang Jun, Ma Wei, et al. Analysis on O2O Integration Development and Countermeasures of Rural Tourism in the "Internet +" Era [J]. Electronic Commerce, 2016, 000(010):4-5.DOI:10.3969 /j.issn.1009-6108.2016.10.002.

[10] Mao Feng. Paths and Countermeasures for the Sustainable Development of Rural Tourism in the "Internet Plus" Era [J]. Reform and Strategy, 2016, v.32;No.271(03):74-77.DOI:CNKI:SUN :GGZY.0.2016-03-014.

[11] Liang Zheng. Paths and Countermeasures for the Sustainable Development of Rural Tourism in the "Internet +" Era [J]. Tourism Overview: Second Half Month, 2018(12):1.DOI:CNKI:SUN:LZHB.0.2018-12-008 .

[12] Han Yuting. Measurement of sustainable development level of rural tourism in Jilin Province and analysis of its influencing factors [D]. Jilin University [2023-06-11].

[13] Wang Weijin and Peng Xinyuan. The path of promoting the sustainable development of rural tourism poverty alleviation under the background of "Internet +" [J]. Economic Management Abstracts, 2019, 000(004):P.171-172.

[14] Chen Hong. Discussion on the Path and Countermeasures of Sustainable Development of Rural Tourism in the "Internet +" Era [J]. Shopping Mall Modernization, 2019(1):2.DOI:CNKI:SUN:SCXH.0.2019-01-113.

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Comprehensive Analysis of the Factors, Structure and Characteristics of the Teaching Behavior of Physical Education Teachers in Colleges and Universities

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Abstract: : With the advancement of education and teaching reform, core literacy has become a new teaching concept that teachers of various subjects must pay attention to. It is mainly student-centered, focusing on students' physical and mental health and all-round development. Physical education has a natural advantage in cultivating the comprehensive quality of college students, and the teaching behavior of college physical education teachers also plays a role that cannot be underestimated. This article studies the behavioral factors of physical education teachers in ordinary colleges and universities in our city. Using the method of factor analysis, the interview and observation method combined with the literature data are used for analysis, and all the physical education teachers in ordinary colleges and universities in our city are interviewed.

Keywords: Comprehensive Analysis, Factors, Structure and Characteristics, Teaching Behavior, Physical Education

1. INTRODUCTION

At the university stage, students' thinking is basically mature, they have a certain ability to distinguish right from wrong, they start to plan their own life, and they are full of good expectations for the future, especially the various performances of students in physical education classes will have a great impact on their future career big impact. To cultivate the core literacy of contemporary college students, the teaching behavior of college physical education teachers should be standardized and scientific. Sports awareness" to form correct values.

Teacher quality or teacher quality is the internal and external quality requirements of the teacher profession for teachers. It is an important factor that determines the success of education. It is a principle that people have established for a long time. There is no doubt that this principle is the research topic that people are most interested in, the research on this topic has been focusing on exploring the quality of teachers and its scope, and the relationship between quality of teachers and teaching. Attract students with unique personal charm and introduce students into the sports situation set by themselves. Nowadays, quality education emphasizes the concept of "student-oriented". Physical education teachers should provide students with a comfortable sports environment, and at the same time organize students to be responsible for the whole process of sports activities.

Of course, physical education teachers should also organize students to participate in the formulation, management, and evaluation of sports rules, to cultivate students' sense of responsibility and learn self-discipline. Among the 30 class group organizers, teachers assembled 9 times, accounting for 30%, and students assembled 21 times, accounting for 70%. Most of the physical education classroom organizations in Chaohu College are organized by students, and teachers organize relatively few entire teams, which fully reflects the characteristics of teacher-led and student-centered teaching in physical education classroom organization. There are 21 times in four rows, accounting for 70% of the entire 30 lessons, 2 times in three rows, accounting for 6.6%, 4 times in two rows, accounting for 13.3%, other formations, including round, square, the two-way column has a total of 3 times, accounting for 10%.

The above statistical results show that the physical classroom assembly formation of Chaohu University is mainly composed of four rows of horizontal teams, and the proportions of three horizontal rows, two horizontal rows and other formations are relatively small. Through the observation of narrating demonstration behaviors in 30 classes of physical education classes, the total time for teachers to explain class content is 191 minutes, and the average time for each class is 6.3 minutes, the longest time is 14 minutes, and the shortest time is 2 minutes. When explaining, teachers should use wonderful language, concise sentences, and easy-to-understand words in the process of language narration, and at the same time, the speaking speed should be gentle. For students to understand the content of classroom teaching, teachers need to express the theoretical knowledge they have mastered in easy-to-understand language.

At the same time, the explanation time should not be too long. If the explanation time in the physical education class is too long, the students will feel impatient, the vaguer the students' understanding, the teacher's explanation may not achieve the expected effect, thus reducing the classroom efficiency. Then performance evaluation is a formal system to regularly inspect and evaluate the work performance of individuals or groups. This evaluation is not inherent, but merely a means to achieve a higher level of performance.

2. THE PROPOSED METHODOLOGY

2.1 Characteristic Factors of Physical Education Teachers' Teaching Behavior

As a profession, teachers must face personnel management tasks such as teacher selection and training, performance evaluation, etc. The focus of the work is performance evaluation, establishing an institutionalized and standardized model for the evaluation, promotion, appointment, and training of teachers' professional titles. Under the core literacy, college physical education teachers should realize the importance of their own roles and should not be the role of

guides throughout the process, but also allow students to fully play the role of participants and play the role of participants, to integrate with students and let students feel the intimacy of physical education teachers.

For example: In physical education classroom activities, physical education teachers have dual roles, not only as imparters of knowledge, but also as participants in various activities. They are on an equal footing with students and have achieved "democracy", "equality" and "cooperation" to a large extent. "The concept of modern education. Most of the students have the same wrong movement when practicing, or the movement is not in place, then the teacher can understand the overall situation of the students in the class during the movement practice. Group evaluation also accounts for a large proportion in the classroom practice guidance link, accounting for 40% of the total number of observations, indicating that group guidance is also often used by teachers in practice guidance. Group guidance can enable teachers to observe in a relatively specific manner according to the practice situation of each group of students, on the premise of ensuring classroom efficiency, optimize the guidance to students in the classroom, and can efficiently complete the practice guidance for all students. It is a practice guidance method that takes both quality and efficiency into consideration.

The sample distribution is dominated by professors and associate professors. Awareness of work. The data £ supports the previous cognition and hypothesis, and it can be considered as a highly professional management work. For ordinary college sports workers engaged in teaching, experts and scholars have a high degree of agreement on academic qualifications, but they have different understandings on the training of teaching skills. 20% believe that having a degree does not require job training. This once again proves that the necessity of teacher training needs to be emphasized. In the teaching behavior of college physical education teachers, it is particularly important to design teaching behavior before class, and to achieve the expected effect of educating people, they must have a strong sense of purpose.

Therefore, to infiltrate core literacy into every link of physical education activities, college physical education teachers need to dig out physical education teaching resources, have in-depth conversations with students, understand the different interests of different students, and then scientifically implement teaching goals. In the pre-class design, college physical education teachers should start from the school semester physical education teaching plan and arrange their own module teaching reasonably to ensure that students can acquire physical education knowledge more conveniently and can systematically support the entire sports event. It is also widely used in practice guiding behavior. It is also understandable that the proportion of individual guidance in the statistical results is relatively small. It is unrealistic for teachers to give separate guidance to dozens of students in the classroom. The classroom time is only 45 minutes, and there is not enough time to do the guidance exercises like this meticulous. However, through observation, it is found that the teachers of general elective courses will give individual guidance to students on movement exercises. Because the number of students is relatively small and there is relatively enough time, they will give individual guidance.

2.2 Suggestions on Optimizing the Teaching Behavior of College Physical Education Teachers

The classroom teaching of teachers of special elective courses is more detailed. In the process of screening variables, except for KMO, the value is not higher than O. In addition to 741, in terms of other data reflecting the structural characteristics of factors, although the amount of variance explained has been reduced, the value of the western difference congruence matrix of estimated regression scores shows that the inter-independence of each factor is not as good as the extraction of 6 factors. It is appropriate, therefore, to accept the 6 public causes. College students are about to enter the society, and their level of ideological understanding is gradually improving, but they also need reasonable guidance from teachers to truly cast themselves into excellent modern talents. It is not difficult to find that college physical education teachers implement good teaching behaviors in class. First, adopting various teaching methods such as group cooperative learning and inquiry learning, let students become the masters of the classroom, free up more classroom time for their free activities, and focus on cultivating the participation spirit of college students, as well as the formed in sports competitions. Cooperation quality. Therefore, every student is taken into consideration and individual guidance can be realized.

In the observation, it is found that teachers often spend the most time on the practice guidance, because students need to pass the teacher's guidance for a long time before they can gradually achieve the correct and standardized movements and meet the requirements of practice. Teachers have clear teaching tasks stipulated in the syllabus, but teachers do not pay much attention to the interaction of teaching in the actual teaching process, and they do not pay much attention to the cultivation of students' teaching ability, which includes the use of teaching aids such as layout diagram’s ability, and the result of doing so will inevitably affect the teaching effect. For example, in hurdle teaching, we should let students understand the hurdle first. It is not difficult to do this. It can be explained in the assignment of homework, and the effect of doing this is obvious; it can reduce students' fear of high hurdles.

Under the core literacy, to optimize the teaching behavior of college physical education teachers, we should encourage physical education teachers to use bold and innovative teaching methods, and independently develop courses on this basis. Physical education teachers must concentrate on trying new physical education teaching methods and can adopt diversified teaching methods of "multi-directional interaction", "cooperative learning" and "joint cooperation". In the practice of sports activities, physical education teachers need to put students' competition organization ability and special referee ability in an important position and give students opportunities to experience different roles. For example, some students can be recorders, and some students can be safety officers , some students can be referees, etc., to stimulate students' enthusiasm for sports in an all-round way.

3. CONCLUSION

To sum up, under the guidance of core literacy, college physical education teachers must recognize the shortcomings of current physical education teaching and the root causes of such shortcomings, and then take effective measures to correct their own teaching behavior. In addition, college physical education teachers must continue to study, explore hard, constantly dig out and deeply understand the

connotation of sports core literacy, and strengthen their own professional sports skills learning. Teachers should pay attention to the summary after class, not only to prepare before class, but also to Summarize after class. Pay attention to the interaction with students in class, learn more about students' ideas, and recall the teaching process after class to have a general evaluation of yourself, correct shortcomings, and deficiencies, and become a qualified teacher.

4. REFERENCES

[1] Wang Le. Research on the Reform of Teaching Behavior of College Physical Education Teachers in the New Era under the Background of Big Data [J]. Innovation Research on Ice and Snow Sports, 2021(4):102-103.

[2] Zhang Kongjun, Tian Xiaojing. Optimization of teaching behavior of college physical education teachers under the core literacy [J]. Contemporary Sports Science and Technology, 2021, 11(11): 3.

[3] Liang Hui. A qualitative study on the teaching behavior of physical education teachers in higher vocational colleges [D]. Nanjing Institute of Physical Education, 2019.

[4] Sun Zheng, Hu Wanxiang. Research on Teacher Factors of Effective Physical Education Teaching in Colleges and Universities [J]. Journal of Hebei Institute of Physical Education, 2015, 29(2):4.

[5] Zhang Weimin. Analysis on the Influence Structure of Physical Education Teachers in Colleges and Universities[J]. Journal of Social Sciences of Hunan Normal University, 1994(1):2.DOI:CNKI:SUN:HNSS.0.1994-01-021.

[6] Jiang Yinxing. On Some Characteristics of Physical Education Teachers' Teaching Behavior [J]. Science and Technology Information, 2010(12):1.DOI:10.3969/j.issn.1001-9960.2010.12.575.

[7] Luo Junbo, Guo Zhenhua. Research on Effective Teaching Behavior of College Physical Education Teachers [J]. Wushu Research, 2017, 2(6):4.DOI:10.3969/j.issn.1004-5643.2017.06.043.

[8] Luo Ping. Research on Influencing Factors of College Physical Education Teachers' Curriculum Decision-making [J]. [2023-06-12].

[9] Zhang Yizeng. Investigation and research on the relationship between teaching concept and teaching behavior of college physical education teachers——Also discussing the quality improvement and teacher training of college physical education teachers [J]. Fujian Sports Science and Technology, 2006, 25(3):5.DOI:10.3969 /j.issn.1004-8790.2006.03.015.

[10] Guo Jingcheng. Physical Education Teachers' Teaching Behavior Forms and Practice Analysis [J]. Examination Weekly, 2008(33): 1.

[11] Zhang Peng. Analysis on the Development Factors of Physical Education Teachers in Colleges and Universities [J]. Sports World: Academic Edition, 2007(2):2.DOI:CNKI:SUN:TYSJ.0.2007-02-011.

[12] Ren Le. Analysis of Influencing Factors in the Formation of College Students' Physical Literacy in Liaoning Province [D]. Shenyang Institute of Physical Education, 2015.

[13] Zhang Hao. Factors Analysis of Teaching Behavior of Physical Education Teachers in Normal Universities in Shijiazhuang City [D]. Hebei Normal University, 2004. DOI: 10.7666/d.Y598171.

[14] Yu Yang. Research on the current situation of classroom teaching behavior of physical education teachers in Haibin College [D]. Hebei Normal University [2023-06-12]. DOI: 10.7666/d.d124551.

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Research on Management Accounting Practice and Teaching Reform Based on the Integration of Business and Finance

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Abstract: With the rapid development of my country's economy, enterprises are facing more intense competition. Strengthening the innovation and practice of management accounting and integrating business activities and financial activities can make up for the shortcomings of traditional management accounting while enhancing the effect of enterprise management., and then enhance the market competitiveness of enterprises. As a core course of accounting majors in colleges and universities, management accounting has many problems in its teaching process. Therefore, based on investigation and analysis, the article concludes that its teaching Goal deviation, low course orientation, insufficient succinct teaching, single teaching and assessment mode, etc., and according to the background of business-finance integration, increase the practical ability of management accounting, and put forward specific improvement measures.

Keywords: management accounting, teaching reform, business, and finance

1. INTRODUCTION

In traditional enterprises, business and finance are two relatively independent elements, but the purpose of both is the same: reducing costs and increasing efficiency. Finance is to reduce the production cost of the enterprise and enable the enterprise to operate normally. Business is to increase the income of the enterprise and realize the purpose of profit. Because there is such an inevitable connection between the two, the integration trend of financial management and business activities It is becoming more and more obvious. There is a big difference between enterprise management accounting and ordinary financial accounting in terms of work content. The focus of its work is to provide decision-making for maximizing benefits through accounting calculations, improve the economic benefits of enterprises, fill in loopholes in business management, and improve the quality of enterprises. financial situation.

The integration of business and finance is a management accounting concept that is more popular in the current accounting practice circle. Its core connotation requires the accounting department of the enterprise to analyze and predict the comprehensive information of the enterprise based on doing a good job of accounting and analyzing the financial information of the enterprise. Provide support for business management decisions. However, in actual operation, the implementation of this concept of management accounting by enterprises is not ideal. The business department often only cares about the quality of business implementation, and the relevant financial knowledge is relatively scarce. The financial department adjusts its own work, which to a certain extent has brought adverse effects on the normal production and operation of the company, the smooth development of the company's financial management work, and the construction and practice of the company's management accounting system, and even brought costs to the company. avoidable loss.

Over the years, accounting has generally been divided into two categories: financial accounting and management accounting. However, no matter in terms of curriculum setting or class time allocation, management accounting cannot be compared with financial accounting, and its status is obviously low. Through the investigation, it is known that most of the financial accounting majors in application-oriented undergraduate colleges have set up accounting simulation training, management information system training, auditing simulation training and other related practical courses, but set up training courses related to management accounting. In terms of class hours, financial accounting and financial management courses generally have more class hours than management accounting courses. For example, our school has 108 class hours in financial accounting and 72 class hours in financial management, while management accounting only has 54 class hours.

Under the construction of business-finance integration, the financial department will participate in various business activities of the company from the perspective of the business department and use financial thinking and financial methods to guide the business activities of the company to develop in a more scientific and reasonable direction. The financial department can use the traditional bookkeeping method to give full play to the role of management accounting and bring more value to the enterprise, while the business department will provide the financial department with more timely and accurate information based on financial thinking and financial methods. Enterprise production and operation costs, expenses, risks, changes in market conditions and other information provide support for the further work of the financial department. In traditional enterprises, financial accounting only needs to calculate the flow of business management after the fact, but the addition of management accounting will change in addition to this situation, the functions of the financial department have undergone a huge change. In the past, the work of financial accounting was just a record, but now the work of management accounting lies in the creation and management of corporate value, and its pre-supervision function has been magnified.

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2. THE PROPOSED METHODOLOGY

2.1 The Current Situation of my country's Enterprise Management Accounting and "Integration of Business and Finance"

The financial and business systems in traditional enterprises are independent of each other and have no intersection. There are great difficulties in information connection, acquisition, and communication. In the process of integration of business and finance, enterprise managers need to change the traditional business management mode of separation of business and finance, integrate information within the enterprise group, eliminate barriers between departments, and provide better performance of management accounting functions for business and finance. The development of the integration of business and finance enables financial personnel to analyze the weak links in the production and operation of the enterprise based on an in-depth understanding of the business activities of the enterprise, and then analyze the risks that the enterprise may face and formulate a more scientific risk prevention and control plan for the enterprise. Provide enterprises with risk prevention and control and decision-making to deal with risks, enhance the risk prevention and control capabilities of enterprises, reduce the losses caused by risks to enterprises, and ensure the smooth operation and further development of enterprises.

The teaching method of management accounting is still the traditional one-way transmission classroom teaching method with teachers lecturing and students passively listening to the lectures. The multimedia tools commonly used in colleges and universities only play the role of PPT demonstration. Teachers basically explain according to the content of the textbook, mainly focusing on classroom lectures and exercises, and there is almost no practical teaching link. This teaching method lacks openness, autonomy, discussion, and interaction. Students can only memorize theoretical knowledge by rote and copy formulas and models mechanically. They cannot deeply understand its connotation and cannot connect theory with practice.

It is also impossible to give students the ability to independently use management accounting knowledge to solve practical problems. Under such a teaching method, it is difficult to cultivate applied accounting talents. The development of the integration of business and finance enables financial personnel to analyze the weak links in the production and operation of the enterprise based on an in-depth understanding of the business activities of the enterprise, and then analyze the risks that the enterprise may face and formulate a more scientific risk prevention and control plan for the enterprise. Provide enterprises with risk prevention and control and decision-making to deal with risks, enhance the risk prevention and control capabilities of enterprises, reduce the losses caused by risks to enterprises, and ensure the smooth operation and further development of enterprises. First, financial personnel should re-understand the position of accounting, consider the relationship between business and finance from a higher level, and then propose solutions for the value creation of enterprises. You can't stop thinking on the record and accounting of income and expenditure, but you should elevate your thinking to business operations and position yourself as a value creator.

2.2 Innovation and practice of enterprise management accounting based on the integration of business and finance

The old business management model of separation of business and finance has long been eliminated by the fiercely competitive Internet economy era. With the help of information technology, it is the only way out to implement refined management of enterprises. Under the current market competition situation, the traditional business and financial separation management model can no longer meet the needs of the further development of enterprises. Therefore, to further optimize the management accounting system, enterprises should first organically integrate business and finance, and eliminate internal information. The plight of isolated islands improves the overall information collection capabilities of the enterprise, strengthens the circulation of information within the enterprise, and improves the management and control of the daily operations of the enterprise, bringing more efficient decision-making to the enterprise.

With the development of Internet technology, enterprises can use Internet technology to realize the integration of enterprise business and finance, such as designing a special database to collect data generated by various business activities within the enterprise, realizing real-time sharing of business information, and leveraging the value chain. Let the production and distribution activities of the enterprise respond to changes in the relationship between supply and demand in the market in a timely manner, and improve the quality of the business activities of the enterprise. The primary task of management accounting teaching reform is to establish scientific teaching objectives. To meet the new needs of enterprises for new management accounting talents, colleges and universities should revise the new training plan for applied talents and analyze what abilities the new accounting talents demanded by the market should have. , and constantly adjust the training objectives of management accounting talents, integrate IQ, EQ, and financial quotient training into talent training, and vigorously cultivate applied accounting talents.

At the same time, it is necessary to design a more scientific management accounting course system in the training plan, to change the current situation that there is only one management accounting course. Under the current market competition situation, the traditional business and financial separation management model can no longer meet the needs of the further development of enterprises. Therefore, to further optimize the management accounting system, enterprises should first organically integrate business and finance, and eliminate internal information. The plight of isolated islands improves the overall information collection capabilities of the enterprise, strengthens the circulation of information within the enterprise, and improves the management and control of the daily operations of the enterprise, bringing more efficient decision-making to the enterprise.

Let the production and distribution activities of the enterprise respond to changes in the relationship between supply and demand in the market in a timely manner, and improve the quality of the business activities of the enterprise. In the context of the ever-changing information technology era, the innovation of management accounting and the transformation of business-finance integration require the support of many high-quality talents. In the process of promoting business-finance integration, "personnel integration" will also become a major trend. The state attaches great importance to the cultivation of management accounting talents, and enterprises

are also trying to improve the professional level of employees. The integration of personnel is two-way, which requires not only accountants to have matching accounting professional skills and superb business capabilities, but also other business personnel related to accounting work must also have a certain basis of management accounting knowledge. At present, real-time information sharing with the help of Internet technology is becoming the norm, and mastering the necessary common network technologies has also become a rigid requirement.

3. CONCLUSION

In the context of the integration of business and finance, the healthy development of an enterprise is inseparable from management accounting, and the work quality and efficiency of management accounting determine the normal operation of an enterprise. With the support of information technology, the integration of business and finance will make the organic integration of business and finance possible. On this basis, a new working model will be built with the help of human resources, intelligence, and big data platforms. At present, promoting the integration of business and finance and establishing management accounting presents both opportunities and challenges. With the rapid development of information technology, continuous reforms have been carried out in the teaching concept, teaching content, teaching methods, assessment and evaluation of management accounting, and the exploration results of its teaching reform have been gradually put into practice, so that colleges and universities can cultivate management accounting. Applied talents enable management accounting to be fully applied in Chinese enterprises, truly achieve the integration of business and finance, and increase the value of enterprises.

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5. REFERENCES

[1] Chai Yinchu. Innovation and practice of management accounting based on the integration of business and finance [J]. Today's Business Circle, 2021(3): 5.

[2] Li Yanyan. Research on the application of management accounting based on the integration of business and finance [J]. Huaxi, 2021(33): 3.

[3] Niu Meirong. Exploring the Application of Management Accounting in Enterprises Based on the Integration of Business and Finance [J]. Contemporary Accounting, 2021.

[4] Liu Yonghua. Research on the Application of Management Accounting Based on the Integration of Business and Finance——Taking Company B as an Example [J]. 2021.DOI:10.12229/j.issn.1672-5719.2021.41.104.

[5] Pang Zheng. Research on the Application of Enterprise Management Accounting Based on the Integration of Business and Finance [J]. Market Weekly Theoretical Edition, 2021(8): 2.

[6] Cui Lejing. Research on the Application of Enterprise Management Accounting Based on the Integration of Business and Finance [J]. China Small and Medium Enterprises, 2021(10): 2.

[7] Pazlaiti Yibulayin. Research on Enterprise Management Accounting Innovation Based on the Integration of Business and Finance [J]. Knowledge Economy, 2021.

[8] Zhang Aiying. Research on Management Accounting System Based on the Integration of Business and Finance [J]. 2021.

[9] Chen Shuai. Research on the Reform of Management Accounting Based on the Integration of Business and Finance [J]. Market Weekly Theory Edition, 2020(16): 0095-0095.

[10] Lu Ying. Discussion on Innovation and Practice of Management Accounting Based on the Integration of Business and Finance [J]. Chinese Science and Technology Journal Database (Full Text Version) Economic Management, 2023(4):4.

[11] Shen Xianwutu. Innovation and practice of management accounting based on the integration of business and finance [J]. Finance and Accounting, 2019(7): 1.

[12] Chen Wei. Analysis of Management Accounting Curriculum Reform under the Need of Business-Financial Integration [J]. Taxation, 2020.DOI:CNKI:SUN:NASH.0.2020-05-063.

[13] Pan Yuhong. Discussion on Innovation and Practice of Management Accounting Based on the Integration of Business and Finance [J]. Outlook on Bohai Sea Economy, 2021(10): 3.

[14] Zhang Donghua. Discussion on the application of management accounting based on the integration of business and finance [J]. Shanxi Finance and Taxation, 2021(9): 30-32.

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The Inner Mechanism and Policy Innovation of Digital Economy Driving Regional Coordinated Development

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Abstract: In the context of the rapid development of information technology and digital technology, the scale of the digital economy is increasing day by day, and my country's digital economy has ushered in unprecedented progress, which has become an important force leading economic development. The development of the digital economy promotes industrial upgrading and transformation and promotes industrial integration. Many traditional industries have spawned a series of new industries. Promote the formation of a strong domestic market, provide high-quality products and technology supply, and provide a strong impetus for the total capital cycle by enhancing the intermediary role of currency, at the level of international circulation, the digital economy will deepen the connection with the world market, strengthen the law of international value, and reshape the pattern of international division of labor helps the mutual promotion of domestic and international dual cycles, and promotes the final formation of a new development pattern of "dual cycles".

Keywords: Inner Mechanism, Digital Economy, Coordinated Development

1. INTRODUCTION

In recent years, my country's economic development has achieved rapid growth, showing a diversified and innovative development situation, and many pioneering economic industries have emerged. For example, the sharing economy is a new economic form that is leading the development of our country. In addition, there are various forms of digital economic models that have been developed in our country.

Today, the digital economy occupies an important position in my country's economic development and has achieved major results. It also plays a vital role in promoting industrial integration and giving birth to new industrial forms and industrial development models. The "China Internet Development Report 2021" shows that the scale of China's digital economy in 2020 will reach 39.2 trillion-yuan, accounting for 38.6% of GDP. The proportion has increased slightly. With the rapid development of the digital economy in recent years, the boundaries of elements have expanded, and data has become a new element of the production function, acting together with production elements such as resources, labor, and capital on the production and development of the manufacturing industry, which has improved the impact on the economy. level of contribution.

The Outline of the "14th Five-Year Plan" also clearly emphasizes that it is necessary to accelerate the construction of a digital economy, a digital society, and a digital government, and use digital transformation to drive changes in production methods, lifestyles, and governance methods. as a new economic form in which the new generation of digital information technology and the real economy are deeply integrated, the digital economy drives new developments in various fields of the economy and society with new technologies, new products, new formats, and new models, and provides new opportunities for all stages and links of the national economic cycle. Kinetic energy is of great strategic significance for my country to build a new development pattern with the domestic cycle as the main body and the domestic and international dual cycles promoting each other. At present, both developed countries such as the United States and Germany and developing countries such as India are actively promoting digital transformation strategies, and all countries and regions are seizing the commanding heights of the digital economy.

The rapid development of the digital economy has also brought new trends and characteristics to the current industrial and economic development and regional competition. One is that speed has become a competitive factor. The development of the digital economy has made the product and service update cycle shorter and shorter, and competitors in the market are also constantly updating. For enterprises in the digital economy, if they want to achieve good development results in the digital economy, they must ensure speed and be ahead of the market and competitors to become the leader and beneficiary of the development of the digital economy. Second, cross-border cooperation has become inevitable. In the era of digital economy, the development model of going it alone has lost its competitiveness, and cross-border cooperation has become the mainstream trend. China's economy has shifted from a stage of high-speed growth to a stage of high-quality development. While meeting the people's growing needs for a better life, the people have also put forward higher requirements for the development of the manufacturing industry.

2. THE PROPOSED METHODOLOGY

2.1 Art design education with local traditional culture and art as important content

The new generation of information and communication technologies, represented by big data, blockchain, 5G, etc., has accelerated its penetration into the manufacturing industry. The digital economy has a strong fit with the development of the manufacturing industry. The difficulties in the development process of the traditional manufacturing industry lie in the original development It is difficult to break through under the model, but the use of the digital economy

can break the development bottleneck, empower the new development model of the traditional manufacturing industry, improve the efficiency of factor use, reduce the cost of production and operation, and achieve the improvement of economic benefits and product quality. The digital economy has become a manufacturing industry. A booster to accelerate the realization of high-quality development. The digital economy enhances the transportation capacity by improving the means of transportation, and better exerts the scale effect of transportation, thereby shortening the delivery time of a single commodity, reducing the occupation of labor and material materials in the transportation process of commodities, and thus reducing the demand for individual market entities. On the other hand, the development of intelligent technology under the digital economy has promoted the intelligent upgrading of transportation tools, which not only improves transportation efficiency, but also reduces the labor cost in the transportation process.

In the warehousing link, the application of intelligent robots improves the speed and accuracy of sorting parcels; in the transportation link, big data and algorithms help to optimize the delivery route; in the delivery link, the use of machines and equipment such as unmanned vehicles and smart stations The labor time consumption in the transportation process is reduced. Integration with industry is a phenomenon that will inevitably appear in the process of economic development, and the phenomenon of industry integration has existed since ancient times. However, under the background of the current digital economy era, relying on the support of advanced technologies and equipment such as information technology, Internet, and smart devices, it has injected strong impetus into industrial integration, so the trend of industrial integration is more significant in the current era. The understanding of industrial integration can be analyzed from different angles.

From the perspective of information, industrial integration is the integration of technology, relying on technology integration, which blurs the boundaries of industries. From the perspective of marketization, it is the integration of business and products. From the perspective of innovation and development, industrial integration refers to the integrated development of different industries in terms of technology and system. In the context of the era of big data, thanks to the development of "Internet +", new-generation information and communication technologies such as big data, blockchain, and 5G can realize data sharing and release digital dividends. The manufacturing industry takes advantage of data sharing to break the market failure phenomenon of information asymmetry, reduce the cost of information acquisition, shorten the timeliness of information dissemination, obtain the latest industry information in a timely manner, and save information costs; the digital economy also uses the new generation of information technology. The level of science and technology has been improved, the strength of science and technology has been strengthened, the use of advanced technology has improved the efficiency of resource use, and the input cost of resource elements has been reduced.

2.2 Digital economy endows the internal mechanism of high-quality development of regional economy

When digital technology is upgraded, digital labor materials such as smart machines can realize the synchronous update of machine production capacity by upgrading the internal system. This compensation and update method not only makes it easier to combine old machines with new technologies, but also accelerates It not only reduces the intangible loss of fixed capital caused by technological progress, but also prolongs the service life of machinery and equipment, which greatly reduces the loss of a single entity before the end of the physical life of the machine due to technological and competitive reasons. The capital turnover pressure brought about by the overall replacement.

The promotion and drive of the digital economy to industrial integration is also reflected in the aspect of favorable policies. Judging from the current development of my country's digital economy, a series of policies have been introduced from the state to the local level to support and promote the development of the digital economy, hoping to use the digital economy as an opportunity to improve the level of economic development. The promulgation of relevant policies has also brought benefits to industrial integration, cleared the obstacles in the process of industrial integration, and provided good conditions for industrial integration. Specifically, from a macro perspective, guided by the 14th Five-Year Plan, the development of the digital economy is a core point.

China is still the country with the largest emissions of carbon dioxide, sulfur dioxide, and nitrogen oxides in the world. The traditional manufacturing industry is based on an extensive, resource-consuming, and environment-polluting development model with high investment, high energy consumption, and high emissions. A unit of GDP needs to consume a lot of resources, release more pollutants, and have certain adverse effects on the global environment. For example, the traditional manufacturing industry represented by the steel industry is the manufacturing industry with the highest carbon emissions, and the overall carbon emissions of the manufacturing industry account for 15% of China's total carbon emissions.

The digital economy has strengthened the direct connection between the production link and the sales link, enhanced the spontaneous organization and standardization of individual capital staggered movements, and promoted the quantitative balance between the total supply and total demand in the large domestic market. One is the business model of intelligent connection between production, supply and marketing launched by digital platform companies, which directly links the production base with the sales market, so that the scale of production depends to a greater extent on the direct demand for products, rather than the amount of capital that manufacturers can control, avoiding production excess happens. The digital economy has a significant role in promoting industrial integration. Based on grasping its internal mechanism, it is necessary to further study how to accelerate the promotion and upgrading of industrial integration through the digital economy, and at the same time counteract the development of the digital economy. Form a synergy with industrial integration and play a positive role in promoting economic development.

Talent is the core and foundation for the digital economy to empower the high-quality development of the manufacturing industry. Only by putting human resources at the forefront of the high-quality development of the manufacturing industry and attracting outstanding talents can the manufacturing industry see hope and realize the transformation of China's manufacturing industry from " The transformation from a "big manufacturing country" to a "powerful manufacturing country". On the one hand, China's manufacturing talent team is dominated by low-level professionals, and the proportion of high-level professionals is relatively low. According to the statistics of the Ministry of Human Resources and Social Security, in the entire manufacturing industry workforce,

China's high-quality professional talents account for only 5%, while Japan's high-quality professional talents account for 40%, and Germany's is as high as 50%. From the data, we can see directly There is an obvious gap between China's high-quality professional talents and developed countries.

Although China's manufacturing industry is constantly developing, and emerging information and communication technologies represented by big data, blockchain, and 5G are also making progress, the training system for manufacturing technical personnel has not kept up. The construction of a new development pattern is aimed at adapting to the economic the development trend of globalization, on the one hand, guarantees the independence of the function transformation of the total social capital with the smooth flow of the domestic cycle, and reduces the impact of the outbreak of the internal crisis of capitalism on my country's domestic economic cycle.

3. CONCLUSION

The digital economy has become the driving force of economic development, not only promoting the improvement of economic level, but also promoting the regional economy. The promotion of the digital economy to the regional economy is reflected in the internal mechanism of providing technical support, creating market demand, bringing favorable policies and providing convenient channels, curb bad competition in the market, avoid disrupting the normal market order by unfair means, use legal means to protect the legitimate rights and interests of regional economic enterprises, encourage enterprises to take advantage of the confidence of the digital economy, and create a positive environment for the development of the digital economy in the regional economic industry good environment.

4. REFERENCES

[1] Liu Jiaqi. Research on the impact of digital economy on high-quality economic development from the perspective of efficiency [J].[2023-06-12].

[2] Guo Bin, Du Shuguang. New Infrastructure Helps High-Quality Development of Digital Economy: Core Mechanism and Policy Innovation [J]. Economic System Reform, 2021(3): 7.

[3] Hu Nan, Jiang Aihua. Optimization Effect of Circulation Industry Element Allocation in the Development of Digital Economy [J]. Business Economics Research, 2022(21):5-9.

[4] Xiao Na, Gao Xiaopeng. Multidimensional Industrial Structure Upgrading Effect of Digital Economy Development: Based on the Perspective of Demand Structure Evolution [J]. Business Economics Research [2023-06-12].

[5] Yu Shan, Fan Xiufeng, Jiang Haowen. Research on the Impact of Digital Economy Development on Carbon Productivity Improvement [J]. Statistics and Information Forum, 2022, 37(7): 10.

[6] Zhao Xiaoyang, Yi Changjun. Has the development of digital economy increased the activity of urban entrepreneurship? [J]. Modern Finance and Economics: Journal of Tianjin University of Finance and Economics, 2022, 42(11):13.

[7] Yang Dapeng, Chen Mengtao. Research on the Mechanism of Digital Economy Development Promoting Enterprise Innovation[J]. Copied Newspapers and Periodicals: Innovation Policy and Management, 2022(10):10.

[8] Zhu Heliang, Li Xiaowan. The mechanism and path of digital economy driving the construction of a unified national commodity market [J]. China Circulation Economy, 2023, 37(1):9.

[9] Tian Ye, Ye Yiting, Huang Jin, et al. The Inner Mechanism and Empirical Test of Digital Economy Driving Rural Industrial Revitalization—Based on the Intermediary Effect of Urban-Rural Integration Development [J]. Agricultural Economic Issues, 2022(10): 13.

[10] Chen Zhuo, Xu Zhiguo, Xie Henglang. Policy Interpretation and Development Path of Digital Economy [J]. Macroeconomic Management, 2022(4):7.

[11] He Aiping, Xu Yan. The Inner Mechanism of the New Development Pattern Empowered by the Digital Economy from the Perspective of "Das Kapital" [J]. Teaching and Research, 2022(1):10.

[12] Wang Juan. Digital economy drives high-quality economic development: factor allocation and strategic choice [J]. Ningxia Social Sciences, 2019(5):7.DOI:CNKI:SUN:LXSK.0.2019-05-012.

[13] Huang Nan, Wang Cong, Bo Wenguang. Digital economy drives industrial transformation under the new development pattern: internal mechanism and realization path [J]. Jianghai Academic Journal [2023-06-12].

[14] Ren Baoping, Sun Yixin. The Mechanism and Path of Digital Economy Cultivating New Advantages of my country's High-quality Economic Development [J]. Economic Vertical and Horizontal [2023-06-12].

[15] Wang Changjun. The Intrinsic Mechanism and Realization Key Points of the Integrated Development of Digital Economy and New Urbanization [J]. Journal of Beijing Union University: Humanities and Social Sciences Edition, 2021, 19(3):9.

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Research on the Innovation of University Financial Management System Based on Big Data Technology

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Abstract: Analyze the correlation between big data technology and university management accounting, summarize the impact of big data technology on university management accounting, point out the main path of big data technology into university management accounting, and finally combine the current big data technology in the university management accounting system The current situation of application in innovation, put forward four countermeasures and suggestions, for the reference of the accounting management departments of universities. This paper briefly introduces the connotation of "big data", analyzes its role in promoting financial reform, and combines the particularity of financial work in colleges and universities, and proposes to build a "big data" service sharing platform, improve the information level of financial management, and cultivate high-quality refined management measures for financial managers.

Keywords: University Finance, Financial Management, Big Data Technology

1. INTRODUCTION

The report of the Nineteenth National Congress of the Communist Party of China emphasized the need to "accelerate the construction of first-class universities and first-class disciplines and realize the connotative development of higher education". In 2018, the Ministry of Education proposed to adhere to "centering on the foundation", promote the "four regressions", and accelerate the construction of high-level undergraduate education. University financial management, as an important part of university management, has a very important position. First, the construction of financial management information under the background of big data will help contemporary universities integrate financial information related to university operations. Secondly, with the help of information technology, the unified processing of financial data of colleges and universities can be realized, and the efficiency of the processing process can be ensured, so that in the process of improving the financial management level of colleges and universities, the reliability and effectiveness of financial data can be fully guaranteed, and then it can be used for colleges and universities. The leadership provides solid financial data support.

Build a "big data" service sharing platform. The realization of "big data" services needs to break the data segmentation between various business processes and departments, and realize the sharing, analysis, and processing of massive information. As a gathering place for high-end talents, colleges and universities should actively use their own talent advantages to build a "big data" service sharing platform. Big data is a renewable resource. With the help of big data, information value-added can be realized, and the massive information in university management accounting can be more fully applied and mined. At this stage, the application scenarios of big data in colleges and universities have shown a diversified development trend. Among them, financial data is widely used in the dynamic collection, processing, and transmission of information, which effectively improves the timeliness of accounting and other information.

At the same time, the in-depth intersection and integration of big data and university management has put forward higher requirements for the comprehensive quality of financial practitioners, requiring financial personnel to have strong information collection and mining capabilities, to improve the accuracy of financial forecasting, enhance the ability to resist financial risks. When implementing financial management work, some financial management personnel have a low professional level, which can easily lead to a weak foundation for financial management work and bury potential safety hazards. In addition, the social public welfare attributes of colleges and universities determine that economic benefits are not the main goal pursued by financial management in colleges and universities, and there is no high requirement for the professionalism of financial management. With the needs of college financial management information innovation and reform, traditional financial managers can only meet the work requirements through transformation and upgrading. To this end, financial managers should actively improve their financial literacy and professional ability to lay the foundation for the construction of financial management information.

Relevant statistical data show that the financial systems of quite a few colleges and universities exist independently, and there is a certain isolation between them and the campus network system. In other words, the financial information management system of colleges and universities is not organically combined with the school's teaching management system, personnel management system, asset management system, etc., and has changed from result-based analysis to process-based mining. For example, for scientific research the analysis of the use of funds should change the traditional situation of simply classifying and analyzing the income and use of funds for a certain period. Instead, it can combine data such as access channels, usage, and value analysis of scientific research funds with scientific research projects. Various documents, data, and materials generated during the implementation process are comprehensively analyzed, and the dynamic performance of the funds for the implementation of the scientific research project can be obtained at any time.

2. THE PROPOSED METHODOLOGY

2.1 Problems Existing in the Construction of Informatization of Financial Management in Colleges and Universities

The full application of big data technology in the feedback and performance evaluation process of financial management in colleges and universities will help to promote the improvement of the quality of management accounting budget preparation. For example, financial management personnel in colleges and universities can use big data technology to form a corresponding management evaluation model based on the fund usage status of each department in the college and department in the previous year and the budget preparation target for this year, and then issue a corresponding analysis report based on the model calculation results. For college decision-making reference. To strengthen the construction of financial management informatization, it is necessary to continuously enhance the awareness of financial management personnel in informatization construction. First, financial management personnel in colleges and universities must fully understand the importance of financial management information construction.

Financial management personnel should realize that the construction of financial management informatization is a prerequisite for improving the level of financial management in colleges and universities; systematically learning the knowledge of financial management informatization and proficiently applying information technology in financial management are important means to improve the efficiency of financial management. Philosophy and cognitive issues have always been the root of financial management informatization construction in colleges and universities. Therefore, before promoting the construction of financial management informatization, university leaders and accounting personnel need to strengthen their own cognition and improve their understanding of university informatization. Only in this way can colleges and universities concentrate their efforts and vigorously carry out informatization construction. In the meantime, the school should regularly organize leadership and accounting personnel to have a preliminary understanding of big data, and then hold exchange meetings, to achieve the purpose of "promoting development through exchanges", so that accounting personnel and university leadership can fully understand to the advantages of financial informatization.

From phased monthly reports to real-time reports, financial management information has a certain lag, and generally only phased monthly reports can be realized. With the continuous development and maturity of "big data" technology and the realization of shared service platforms, the financial statements of colleges and universities can be transformed into real-time reports with the help of professional management software, providing more accurate and timely support for colleges and universities' financial decision-making. If big data technology really wants to play a role in the management accounting of colleges and universities, colleges and universities must combine the existing network system operation status with intelligent software to build a management accounting network operation platform. Among them, the key to platform construction is how to realize the integration of different software functions and the sharing of data between different databases. After the platform is built, attention should also be paid to the realization of interoperability with other platforms of universities, and the dynamic adjustment of the platform building modules should be done in combination with the actual needs of the work. The construction of financial management informatization in colleges and universities is inseparable from the financial management team with high informatization literacy.

2.2 The impact of data technology on management accounting in colleges and universities

First, colleges and universities can meet the relevant requirements of financial management information construction under the background of big data by introducing information technology financial management talents. Secondly, colleges and universities should strengthen personnel training, improve the information technology level of in-service financial management personnel, ensure the smooth development of financial management information construction, and give full play to the role of financial management information construction. The wave of the current big data era can be said to refresh people's understanding of many things. Among them, the first thing that needs to be realized by the financial personnel and the leadership is that, compared with the traditional financial management system, although the information construction is a relatively complex systematic project, once it is completed, it will inevitably reduce the work of the financial personnel. and significantly improve the efficiency of financial management work.

In addition, this innovative financial management model is still in the process of continuous development, which can help colleges and universities transform more traditional financial management models and methods. Improve the information level of financial management. Information in the era of "big data" is growing explosively. "Big data" does not mean flooding of information, but effective extraction based on a large amount of information, which requires the use of the latest data information processing tools. To achieve refined financial management, it is necessary to continuously improve the information level of financial management. The construction of management accounting system in colleges and universities often requires a lot of data.

For example, data stored in the asset system such as network equipment, teaching infrastructure, and real estate; data stored in human resources for teachers' salaries, working years, tax payments, and social security, basic information, academic performance, and credit accumulation of college students are stored in the educational administration system. Because these data belong to different management systems, there is a phenomenon of mutual separation, which is not conducive to the exchange and sharing of management accounting data in the information environment. Under the background of big data, opportunities, and risks of financial management in colleges and universities coexist. With the continuous advancement of information technology, big data has laid the foundation for the high-quality development of financial management, but it also brings corresponding financial security risks. Financial security risks involve the leakage and misappropriation of data information. It is necessary to build an information security firewall in financial management and strengthen the awareness of financial management personnel to ensure the security of financial data information. If colleges and universities want to carry out the information construction of financial management, they must have a solid financial and accounting team as support.

Therefore, it is necessary for colleges and universities to strengthen the construction of the existing financial and

accounting teams, improve their ability to apply information technology, and improve their thinking and cognition, to "add bricks and tiles" to the construction of financial information in colleges and universities. Conversely, if conditions do not permit, colleges and universities can also appropriately hire comprehensive talents to give lectures at the school, to strengthen the construction of the accounting team. The cloud platform is a new data collection and analysis method, which is conducive to the processing and convenient storage of large-scale data. In addition, new information technologies such as the data-driven cross-border mode that integrates LBS and big data technology, efficient data retrieval, and historical arrest mode can all be considered for integration into the financial management system of universities to serve "big data" analysis.

3. CONCLUSION

In the context of big data, it is an inevitable requirement of the times for colleges and universities to accelerate the construction of financial management information. In the process of financial management informatization construction, financial management personnel in colleges and universities need to have advanced information technology concepts to promote the reform and innovation of financial management, colleges and universities need to build professional financial management teams to promote the transformation of financial intelligence and meet the challenges of financial management informatization. Contemporary colleges and universities should increase their understanding of it, and based on this, think about the problems that hinder the construction of financial management informatization in colleges and universities. Only in this way can we ensure that the financial management system of contemporary colleges and universities is in line with the contemporary development. Thereby promoting the degree of financial information construction in colleges and universities in my country, and then ensuring that the development of contemporary colleges and universities can meet the development trend of the big data era.

4. REFERENCES

[1] Yin Qiaoyun, Zhu Yixin, Hu Yuping. Analysis of University Financial Management Innovation in the Big Data Environment [J]. Journal of Jiangsu Engineering Vocational and Technical College, 2017, 17(2):4.DOI:10.19315/j.issn.2096- 0425.2017.02.021.

[2] Liu Huanhuan. Research on the construction of university financial management informatization under the background of big data [J]. Economic and Trade Practice, 2018(8X):1.DOI:CNKI:SUN:JMSA.0.2018-08-059.

[3] Jia Xiuli. Research on Financial Management Model Innovation Based on Big Data [J]. Shanxi Agricultural Economics, 2020(24):125-126.

[4] Huang Xiaoyi, Zhong Lin. A university financial management system based on big data for teaching: 202122826038[P][2023-06-13].

[5] Cheng Wenbao. Research on the Application and Promotion of Information Management System of Shandong Yingcai University [D]. Shihezi University, 2019.

[6] Wang Yulu Kuiyang. Construction of Financial Informatization in Universities Based on Big Data Technology [J]. Caixun, 2020, 000(028):P.162-162.

[7] Ma Ying. Research on University Financial Management in the Era of Big Data [J]. Contemporary Accounting, 2016(10):2.DOI:CNKI:SUN:KJDD.0.2016-10-021.

[8] Yang Yingchun. Exploration of Financial Management Innovation and Development Based on Big Data Environment [J]. Modern Business, 2021.

[9] Huang Xiaolan. Research on the Application of Big Data and Blockchain Technology in the Financial Management System of Universities [J]. Business Accounting, 2020(24): 4.

[10] Wang Yan. Reflections on University Financial Management Based on Big Data [J]. Management Observation, 2014, 000(025): 81-82. DOI: 10.3969/j.issn.1674-2877.2014.25.034.

[11] Zhang Shengnan. Innovation Research on Enterprise Financial Management Based on Big Data Era [J]. Science and Technology Economic Market, 2017(7): 2.

[12] Huang Jinyao. Innovation Research on Financial Information Management of Applied Undergraduate Private Universities Based on Big Data Thinking Paradigm [J]. Industry and Technology Forum, 2020(1):3.DOI:CNKI:SUN:CYYT.0.2020-01- 130.

[13] Lv Jian. University budget management based on big data combined with cloud computing [J]. Accounting Learning, 2019(7):2.DOI:CNKI:SUN:CKXX.0.2019-07-029.

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Research on the Practice Path of English Teaching in Colleges and Universities based on the Background of Big Data

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Abstract: Personalized teaching is an important guide for the reform and innovation of English education in colleges and universities. The application of big data technology in English personalized teaching is conducive to the analysis of the needs of English personalized teaching, further speeding up the construction of English personalized education resources, helping to improve the intelligence level of English personalized teaching, and accelerating the realization of English personalized teaching and multi-field fusion. English teachers in colleges and universities reform English teaching based on the background of big educational data. They need to correctly understand the meaning and characteristics of big educational data and emphasize the significance of English teaching reform under this background. Effective reform of college English teaching under the background of big educational data.

Keywords: English teaching, practice path, big data

1. INTRODUCTION

In recent years, the development of information technology has pushed my country into the era of big data. Under the background of big data, massive English teaching data and resources can be collected and utilized, providing resources and technical support for the development of personalized English teaching in colleges and universities, and can well solve the problem of lack of pertinence and effectiveness in current college English teaching .

However, the current English teaching system in many colleges and universities is not perfect, and even has a certain degree of lag, which makes it difficult to meet the requirements of personalized teaching. Therefore, it is necessary to combine the application advantages of big data technology in English teaching to explore the effective implementation of personalized teaching. Countermeasures. Big data has the characteristics of large capacity, fast speed, variety, and high value. Based on the four characteristics of big data itself, big educational data also has the characteristics of large capacity, diversity, fast speed and high value. Large capacity means that the data in big educational data is not all the data of a school, but in terms of information exchange, multiple educational institutions cooperate to collect learning data to form big data.

Especially in this stereotyped mode, teachers often do not take the initiative to analyze students' English learning needs, but adopt an educational method that treats students equally, which leads to another problem-the English knowledge that most students learn is not what you need is not even what you can accept. This will not only seriously affect the overall educational effect, but even hinder the students' future development, making them confused about not being able to apply English language learning after they enter the society. Although big data technology makes learning more possible, through Internet information technology, the teaching process can be realized online, and students can easily obtain the learning materials they need, and answer questions and solve problems through the Internet.

A lot of teaching content and links have also been transferred to the Internet. The purpose itself is to provide more convenience for students, allowing them to learn through computers or mobile clients anytime, anywhere, and assist offline teaching. However, big data technology is a double-edged sword. With the support of big data technology, the complicated information on the Internet can flow into the eyes of students more conveniently and quickly. distraction and temptation. The primary task of implementing English personalized teaching under the background of big data is to formulate personalized teaching objectives, so that teachers can carry out teaching design around accurate teaching objectives. First, teachers should use big data technology to investigate and count students' personal status and English learning status, such as major, English foundation, English specialty, learning ability, hobbies, future development direction, etc., and then summarize and analyze the collected data and use them as the basis for the formulation of teaching objectives ensures that the teaching objectives are more personalized.

2. THE PROPOSED METHODOLOGY

2.1 The Application Advantages of Big Data in English Teaching

Educational big data can replace the traditional expert evaluation method, with the help of specific teaching activity data in English teaching, to evaluate the teaching level of teachers, to judge the acceptance of students' course knowledge, and to effectively restore classroom learning with data. Therefore, big data can show students' learning experience in a quantitative form, effectively solve the problems in the traditional English teaching model, clarify students' learning needs, and help teachers innovate teaching models based on students' learning needs and realize the reform and development of English teaching. Teachers can use big data to organize investigation activities, investigate English topics and knowledge that students are interested in before the teaching work begins, and then design course activities around their interests to guide them to learn their favorite English knowledge.

On the other hand, teachers can also use big data to analyze the deficiencies exposed by students in previous learning activities, design more targeted teaching activities around their deficiencies, and guide students to focus on themselves in the actual English language use process. In case of mistakes, re-learn relevant knowledge. In this way, with the support of big data, under the guidance of teachers' targeted teaching and adjustment, students will be able to raise their English level to a new level. To better meet the needs of the society for talents, it is necessary to improve students' English application and practice level. Taking the improvement of professional ability as the leading direction of English teaching, we focus on training students' English "listening, speaking, reading, and writing" and other practical abilities. At present, English teaching in many colleges and universities still attaches great importance to theory, which has caused many students to find that their English knowledge is out of line with the job requirements when they step into the workplace.

The reform of the teaching mode under the perspective of big data can provide students with more opportunities for language application. Students can use network data resources to implement online video and audio remote connections and communicate directly with teachers or foreign teachers in English. Practice your English-speaking ability. Personalized teaching evaluation can more accurately understand students' learning status, assist teachers to improve the teaching process, promote teacher-student dialogue and improve teaching quality. Therefore, colleges and universities should actively improve the original evaluation system and make full use of big data technology to assist the construction and innovation of the teaching evaluation system. In this regard, it is necessary to effectively apply big data technology to process evaluation and formative evaluation, overcome the one-sidedness of summative evaluation, and improve the scientific degree of evaluation. When evaluating teaching quality and students' learning outcomes, we should not only refer to students' daily test results but should add students' performance in daily learning to the evaluation system through quantitative or qualitative indicators, to comprehensively measure the status of English teaching.

2.2 Practice Path of College English Teaching under the Background of Educational Big Data

In the technical role, teachers should clarify their own learning strategies and the status of instructors of information technology. College English teachers need to guide students to effectively master network technology, autonomous learning strategies and information acquisition methods. Network teaching provides students with a broader space for learning. These situations are different from face-to-face communication situations. Most of the participants in network learning have Different learning motivations, learning characteristics, learning backgrounds and cultural backgrounds. Therefore, students' English learning and communication interaction under the background of big educational data will correspond to various problems.

As for expanding the teaching space, using big data to open online education channels, micro-class teaching and distance teaching are good choices. To put it simply, the emergence of big data and the Internet has narrowed the distance between people, allowing communication to transcend space barriers and not be limited by time. The learning of English language should also be a continuous process. Only by letting college students live in the English language environment for a long time can they better stimulate their English learning and application awareness, and at the same time improve their related abilities. Therefore, college teachers can use information technology as a support, use big data and the Internet to build an information teaching platform, and teach English knowledge to students through the platform. Big data technology makes the acquisition of teaching materials more convenient. Therefore, both teachers and students should actively use these new technologies to realize the innovation of the teaching system.

For example, teachers can download course-related European and American film and television materials, original sound songs, and picture news hotspots on the Internet, and then use multimedia teaching equipment to insert them into the classroom teaching process, to firmly grasp the students' attention, and at the same time communicate with students. With more and richer communication content. But there are also higher requirements for teachers. Teachers must have the ability to operate modern teaching equipment and the ability to screen and identify Internet learning content. In addition, big data technology can also provide evaluation support, summarizing and analyzing the learning volume and learning task data that students complete online every day. Through data, teachers can clearly understand students' learning frequency, duration, accuracy, test results, etc., and build a perfect and scientific personalized teaching evaluation system.

In addition, students' mutual evaluation and self-evaluation can also be added to the evaluation system, allowing students to evaluate teaching quality and learning effects from their own perspectives, and allowing students to fully learn from the evaluation results supported by big data technology to improve the personalization and standardization of evaluation . In the context of big data in education, college English teachers need to integrate teaching resources to reform English teaching, that is, to integrate student learning resources, and to achieve effective reform of English teaching with rich English teaching content. Based on the background of big educational data, students can obtain richer learning resources than previous classroom teaching content. For example, they can obtain a large amount of English learning materials with the help of English media, WeChat, websites, and other carriers.

In recent years, my country has actively developed college English online quality courses. On the MOOC platform, students can learn English writing, speaking, pronunciation, grammar, culture, and basic language knowledge through many teaching videos. Finally, it is worth mentioning that college English teachers' understanding of big data and their ability to innovate teaching greatly affect their design of the entire teaching activity. Therefore, to better optimize college English teaching and promote the positive development of students' literacy in the big data environment, we should also strengthen the professional quality training of college English teachers and improve their personal abilities. First, teachers can actively participate in teaching and research activities, and discuss with other teachers on how to use big data to optimize English teaching in the teaching and research activities.

3. CONCLUSION

Personalized teaching under the background of big data is an effective way to improve the quality of English teaching in colleges and universities, and it is also a practical need to connect and meet students' personalized learning and teachers' personalized teaching. Therefore, colleges and universities and teachers should pay attention to the practical research of

English personalized teaching. College teachers should form a correct understanding of this, face up to the problems existing in English teaching and student learning in the current environment, clarify the positive significance of big data for optimizing teaching, and actively change teaching ideas, accurately use big data tools to optimize the teaching structure, adjust the teaching methods, and at the same time strengthen the cultivation of students' English quality, so as to better promote the growth of students and help the development and growth of the social talent system.

4. REFERENCES

[1] Chen Guo. Practice and Exploration of College English Writing Teaching Reform under the Background of Big Data [J]. English Teacher, 2015, 15(11):3.DOI:CNKI:SUN:YJJS.0.2015-11-011.

[2] Yao Yueying. Innovative practice of college English teaching based on the concept of flipped classroom in the era of big data [J]. Northern Literature: China, 2017(3):1.DOI:CNKI:SUN:BFWX.0.2017-08-115.

[3] Jin Xiaomei. Discussion on College English Teaching Mode under the Background of Big Data Technology——Comment on "College English Writing Online Course" [J]. Chinese Science and Technology Papers, 2021, 016(010):P.I0001-I0001.DOI: 10.3969/j.issn.2095-2783.2021.10.019.

[4] Liu Haiye, Qi Hongjuan, Zeng Lingwei, et al. Online digital teaching plan generation method and system based on big data cloud platform: 202310411702[P][2023-06-17].

[5] Chen Weihong. Discussion on the Reform of College English Writing Teaching Based on the Background of Big Data [J]. Wisdom, 2017(15): 1.

[6] Song Yuanyuan. Research on English Teaching Mode in Colleges and Universities from the Perspective of Big Data [J]. Wisdom, 2020(06):55-55.DOI:CNKI:SUN:CAIZ.0.2020-06-046.

[7] Zhang Hong. Innovation of English teaching in colleges and universities under the background of big data at the present stage [J]. Overseas English, 2019(20): 2.

[8] Huang He. Research on Accurate Teaching of Smart Classroom in Colleges and Universities under the Background of Big Data——Taking "College English" Course as an Example [J]. Teaching and Educating People: Higher Education Forum, 2022(12): 3.

[9] Wang Tao. Research on the Application of MOOCs in the Translation Teaching of English Majors in Guizhou Universities Based on the Background of Internet Big Data [J]. Journal of Jiamusi Vocational College, 2019(1):2.DOI:CNKI:SUN:JMSJ.0.2019- 01-125.

[10] Zhu Zhi. Research on the Practice of Personalized English Teaching in Colleges and Universities under the Background of Big Data [J]. Educational Theory and Practice, 2021, 41(30): 3.

[11] Zhang Naizhi. Research on the Practice of Personalized English Teaching in Colleges and Universities under the Background of Big Data [J]. English Square: Academic Research, 2022(29):106-109.

[12] Huo Na, Long Hao. Practical Research on College English Precise Teaching Mode under the Background of Educational Big Data [J]. Journal of Fujian Radio and Television University, 2019(4):4.DOI:CNKI:SUN:FJGB.0.2019-04- 010.

[13] Liang Xiaodong, Dong Xu. Research on the Effectiveness of English Teaching in Colleges and Universities under the Background of Big Data [J]. Campus English, 2018(8): 1.

[14] Wang Tao. Research on the Application of MOOCs in the Translation Teaching of English Majors in Guizhou Universities Based on the Background of Internet Big Data [J]. Journal of Jiamusi Vocational College, 2019, 194(01):209-210.

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Application System Design of Budget Performance Management Based on Intelligent Data Entry and Mining Algorithm in Colleges

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Abstract:Through intelligent data entry and association rule mining technology in data mining, historical data in educational administration teaching is analyzed and rules are extracted, and potential rules in historical data that are instructive for future work are obtained. The coordination of responsibility is the goal orientation of the design of the performance evaluation model for college teachers. Using the AHP method, a fuzzy evaluation index system is designed, and a performance evaluation model for college teachers is constructed from this. The system dynamics method is used to carry out simulation. Combined with the user's main body evaluation, an evaluation report is formed, and the project performance completion status is obtained.

Keywords: Application System Design, Budget Performance Management, Intelligent Data Entry, Colleges and Universities

1. INTRODUCTION

The bus passenger flow survey provides basic data for bus planning, dispatching operation and route optimization, but the inhomogeneous distribution of bus passenger flow in space and time makes the bus passenger flow survey a costly and tedious task [1]. The reason why this winter appears, the main reason is that college administrators lack a correct understanding of budget performance management [2], fail to recognize the importance of budget performance management, simply think that budget management is only the work of the financial department, and have not done a good job of budget performance management [3]. And there is no related management content implementation in colleges and universities, so the related research on college budget performance management is the current focus of researchers in related fields. In the budget performance management model [4].

.Data mining is a new technology applied in the era of big data. In the era of big data, the level of informatization in the work [5] of public institutions has been continuously improved, resulting in a large amount of data. On the one hand, these data can accurately record and reproduce the work of the unit, that is, the descriptive schema of the data. Data mining is a multidisciplinary field that integrates database technology [6], machine learning [7], information retrieval, artificial intelligence and other latest technologies. It is widely used in various fields, such as banks and insurance companies. Classification models use this to predict fraudulent behavior. The nature of public goods and the need for equity in education. In modern times [8], with the development of privatization of colleges and universities, the performance of financial education investment has become the main object of concern for related parties [9], and academic circles have also carried out research, which is mainly reflected in the following two aspects: It is believed that colleges and universities benefit many subjects, therefore, it is necessary to In accordance with market principles, market entities should take the initiative to bear these costs [10].

Taking Canadian university education as an example, further research shows that there is a phenomenon of unclear responsibilities of various market entities in university education, and it is difficult to achieve optimal benefit output. On the basis of analyzing the characteristics [12] and functions of the existing university management information systems, this paper absorbs the management ideas of other university management information systems at present. Rules Mining for College Management Information Systems [13]. .NET is a widely used XML Web server platform on which most data software systems or service businesses can be built. As long as they are connected to the Internet, users can freely access published services [14]. The goal of the .NET platform is to allow users to access the information, files, and programs they need regardless of location, time, and device [15].

As the name suggests, teacher performance mainly reflects the effectiveness and contribution of teachers' labor. Based on the aforementioned analysis of teachers' [16] occupation and teachers' labor characteristics, the composition of their performance has its own characteristics. Generally speaking, teacher performance includes both teacher work results. The research on the performance evaluation [17] of educational informatization is relatively late. At present, the current research status of the construction and application of informatization projects in colleges and universities in my country can be seen [18]. The current domestic scholars' research on the performance of informatization projects in colleges and universities still mainly focuses on the performance evaluation of informatization projects in foreign universities [19]. On the relevant experience and the discussion on the completion of the performance indicators of university informatization, the vehicle scheduling operation information of the public transportation system (see Table 2) can be used to assist in inferring the passenger's boarding station [20].

The literature proposes a method of using fuzzy mathematics to connect the passenger's boarding time with the boarding site, and then infer the boarding site. The budget performance management of colleges [21] and universities in our country also lacks the control of execution, because there are many revenue and expenditure items in colleges and universities, and many revenue and expenditure items are temporarily decided [22], which makes the budget plan difficult to implement, resulting in insufficient execution of budget performance management. It is required that multiple links

such as budget performance preparation, implementation, and supervision should [23] pay more attention to the reasonable control of the output and results of budget funds. When colleges and universities carry out budget performance management, they are quite different from other fields [24].

2. THE PROPOSED METHODOLOGY

2.1 The Intelligent Data Entry and Mining Algorithms

As a method of mining useful content in big data in a timely manner, data mining technology can find useful information from massive information, give full play to the functions of data description and prediction, and improve the performance of data mining. Management level of performance compensation in business units.

The pre-selection of effective candidate support vectors is mainly based on the fact that the support vectors are usually located at the class boundary. Compared with other samples in this class, they are farther from the center of this class and closer to the center of heterogeneity. The samples whose center distance is less than the distance between the two types of samples are used as effective candidate support vectors. Enhancement of enterprise object reusability; objects that encapsulate enterprise logic program code to perform specific functions are enterprise objects. The development of component technology makes more and more reusable component patterns appear in software development. As stated in Definition 2, there are two situations in the time interval between two consecutive card swipes: card swipe interval and running interval. The purpose of the classification step is to distinguish these two cases. In addition to the time spent by passengers getting on the bus and swiping the card, the running interval also includes the travel time between stations, so it is usually larger than the boarding interval.

2.2 The Budget Performance Management

Since solving the standard SVM problem is equivalent to solving the minimum bounding sphere problem, BVM is an approximate algorithm for solving the SVM optimization model based on the minimum bounding sphere. First, the support vector machine is equivalent to the minimum bounding sphere problem, and then the minimum bounding sphere is calculated. The problem is converted to a 1 approximate bounding sphere problem to solve. In this system, the function of judging user authority and system entry is realized by the user login module. According to the identity of the user when logging in, the user has different levels of authority. If the user name and password do not exist or do not match several times in a row, the system closes the login interface.

The whole process management characteristics of internal control management and budget performance management in colleges and universities are also the same. Budget performance management the work is to evaluate the various management transitions of colleges and universities, and runs through every level of college management.

Staff should improve the budget performance management mechanism from the perspective of internal control management. First, they should set reasonable budget performance targets. Budget performance targets are an important basis for colleges and universities to carry out performance evaluation, so it is very important to set reasonable performance targets. Before carrying out the budget performance management of colleges and universities, it is necessary to complete the budget performance plan first, and its essence is to complete the setting of college budget performance indicators and the setting of corresponding tasks. In the university budget performance management system in this article, the maintenance of budget performance tasks is mainly used to realize the creation of various tasks. The premise of any informatization project is budget investment, and the result of the investment depends on the income. In enterprise informatization projects the concept of income is the choice of capital investment. Capital investment is based on a certain considerable prospect. Capital invests in information systems as commodities. It must ensure that the use of the system is closely related to the business operations. The system has a positive effect on the management and production. It can restrain the management of the public sector more effectively and allocate the resources of the sector more efficiently.

2.3 The Application System Design of Budget Performance Management in Colleges and Universities

The specific process is as follows: First, the division of labor between each department should be clear, and each department should perform its own duties. Then, according to the actual situation and responsibilities, the implementation projects of this year should be defined. In terms of database management system, this system uses a database with high security. And equipped with a database server for real-time data backup. In terms of user identity authentication, in addition to system administrators, teachers, and students, other servers and hosts that access the system also need to be authenticated. Not only the user name needs to be verified. Under the guidance and arrangement, many colleges and universities have successively carried out the exploration and promotion of teacher performance evaluation.

Under the new educational policy situation, since 2000, more and more colleges have formulated regulations known as the "University Constitution". The board of directors, council, alumni association, education foundation, etc. have been established, and corresponding procedures have been formulated, which enriches the connotation and significance of the principal responsibility system under the leadership of the party committee in the new era, so as to speed up the development of school education. Performance evaluation process design These four "views" are directly converted into the first-level indicators required for project evaluation, and the second-level indicators derived from the first-level indicators are set up, and relevant methods are used to set theoretical weights and assign theoretical values to the second-level performance indicators. , using subjective and objective methods and tools to collect the values corresponding to the secondary performance indicators in batches during the use of the informatization project.

By estimating x, the travel time of a large number of vehicles on the road can be obtained, and then the parameters composed of the mean value and variance of the new travel time can be calculated. It is a plurality of source data with different characteristics. According to the above operations, all the acquired data features are formed into a set, and a new data connection is constructed in the system software platform. In the connection process, it is necessary to ensure that the data is cleaned and fused.

3. CONCLUSIONS

This system integrates the research results of modern resource management and development, data mining theory, higher education research, information management system and other multi-disciplinary fields to ensure the advanced nature of the system; at the same time, the modularization of system functions requires the improvement of the relevant budget performance management system, to make a reasonable and effective evaluation of budget management. Therefore, colleges and universities should strengthen the application of internal control management in budget performance management to improve the vitality of the unit. However, the application of data mining technology in performance management assessment is not widely used.

4. REFERENCES

[1]Xu Duo, Zhao Zemin. Construction and Application of University Budget Performance Management System Based on Excel VBA——Taking H University as an Example [J]. China Management Informatization, 2022, 25(1):7.

[2] Zhang Chenzhi. Design and Research of University Scientific Research Management System Based on Data Mining Technology in Big Data Environment [J]. Network Security Technology and Application, 2018(5):2.

[3] Qiu Xiangying. The design of university budget performance management system for the integration of industry and finance [J]. China New Technology and New Products, 2021(12):3.

[4] Jiang Ruiyuan. Data mining and its application in supplier evaluation [D]. Hunan University, 2019.

[5] Hong Chuang. Research on the Adoption of User Knowledge Contribution in Open Innovation Community [D]. Jilin University, 2019.

[6] Guo Lihong. Research on the application of big data and artificial intelligence in financial budget management in colleges and universities [J]. Small and Medium Enterprises Management and Technology, 2019(26):2.

[7] Qi Ganlu, Zu Quanmin, Ye Fei. How to apply whole-process performance budget management in colleges and universities [J]. Chinese and Foreign Entrepreneurs, 2018(7):1.

[8] Gao Wenying. Application of data mining in performance salary management of public institutions [J]. 2021.

[9] Li Na. Design and Implementation of Comprehensive Budget Management System in Colleges and Universities [J]. Accounting Learning, 2018(17):2.

[10] Qin Yan. Analysis of the design and implementation of financial budget management system in colleges and universities [J]. China Market, 2018(16):3.

[11] Xia Dan. Management Mechanism of College Budget Performance Target Based on SMART Principle——Taking F College as an Example [J]. Business Accounting, 2021(16):4.

[12] Wang Fei. The application of internal control management in college budget performance work [J]. Finance and Economics, 2019(32):2.

[13] Wang Haimin. Design and implementation of intelligent push service system for university library based on data mining [J]. China Information Technology Education, 2020(19):3.

[14] Zhang Yan. The application of performance evaluation feedback and application management in college budgets [J]. Business Intelligence, 2018, 000(022):68.

[15] Shao Shenghua, Hu Zhenwei. Analysis of College Budget Performance Management Based on Strategic Map——Taking A College as an Example [J]. 2021(2017-6):80-83.

[16] Zhang Lei. A New Model of Comprehensive Budget Performance Management in Colleges and Universities: The Value and Application of Big Data [J]. Journal of North China University of Science and Technology: Social Science Edition, 2020, 20(5):7.

[17] Wang Xuedong. A preliminary study on budget performance management in colleges and universities based on "effect orientation" [J]. Contemporary Accounting, 2020(9):2.

[18] Xu Junwei, Liu Changsheng. Design of evaluation system based on artificial intelligence and deep data analysis technology [J]. Electronic Design Engineering, 2021.

[19] Deng Renfeng. Research on the application of big data technology in the evaluation of scientific research ability of higher vocational teachers [J]. Wireless Internet Technology, 2021.

[20] Wang Wei. Application of artificial intelligence and data mining in ergonomic PHM [J]. Journal of North China Institute of Science and Technology, 2019, 16(5):10.

[21] Xue Yanan. Application of clustering algorithm based on data mining [J]. Industrial Science and Technology Innovation, 2020(10):2.

[22] Zhu Mengran, Yan Xianglin, Yuan Qinjian. Structural Hole Theory and Its Application and Prospect in Social Network Research [J]. Journal of Intelligence, 2018, 37(7):9.

[23] Cheng Ping, Yang Jiwan, Zhu Puyi. Research on Performance Evaluation of Planning and Design Projects Based on DEA-CART Algorithm——Taking the Planning and Design Projects of Research Institute A as an Example [J]. Finance and Accounting Communications, 2021(22) :5.

[24] Li Di. Research on key technologies of hospital archives information management [J]. Microcomputer Application, 2021.

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Intelligent Framework Design of Tourism Culture Development in Rural Construction Based on Intelligent Information Display Platform

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Abstract:Using Web 3D three-dimensional display, virtual reality and other technologies, an intelligent service hall information display and interaction platform based on scene-based services is designed and implemented. applications through the platform. The unique cultural tradition of the countryside is the main attraction of rural tourism and an important foundation for the development of rural tourism. In the process of rural tourism development, tourism development, especially the entry of tourists, will undoubtedly have a significant impact on rural culture. This paper puts forward the design concept of "three-in-one" beautiful countryside, and elaborates it from three aspects of planning, architecture and landscape, so as to provide more systematic technical ideas for the design of beautiful countryside, and to deal with a series of problems such as the protection of rural characteristics.

Keywords: Intelligent Framework Design, Tourism Culture Development, Rural Construction, Intelligent Information Display

1. INTRODUCTION

Rural tourism is a type of tourism that has emerged with the advancement of urbanization, originating in Europe, according to the definitions of the European Union (Eu) and the Organization for World Economic Cooperation and Development (OECD). Rural tourism is a tourism activity that takes place in the countryside [1], in which “rurality is the core and unique selling point of the overall marketing of rural tourism”. Farming culture and rural economy have always been the foundation of China's economic development. China's historical process has shown that the alternation of village prosperity and decline is an inevitable law of social development, and the continuous derivation and development of villages have different driving forces due to different times. Factor [2].

For example, during the Ming and Qing Dynasties, the government restored the villages that were in decline during the war by formulating the land system; since the 18th National Congress of the Communist Party of China [3], it has gradually increased the emphasis on the construction of an ecologically civilized society, in order to alleviate the contradiction between economic development and the ecological environment, and Improve the effect of ecological protection and achieve [4] sustainable economic development. The rural ecological environment is an important part of the ecosystem, and the landscape design should be carried out rationally. On the one hand, it is necessary to vigorously promote the upgrading of popular rural tourism products such as farmhouses, fruit and vegetable picking, and characteristic homestays, learn from successful rural tourism concepts [5], and integrate scattered tourism themes such as agriculture, animal husbandry, and fishery into a system [6].

Wuling Mountain is an ecological protection development area among the five functional areas in Chongqing, and has a heavy responsibility for ecological protection [7]. At the same time, Wuling Mountain is also a concentrated area of continuous poverty in China. The Chongqing Municipal Party Committee and Government have deployed the Chongqing part of Wuling Mountain to get rid of poverty as a whole in 2017 [8], and the construction of beautiful villages is in full swing. Beautiful countryside refers to “sustainable development villages with scientific planning, production development, affluent living, civilized rural customs, clean village appearance, democratic management [9], and livable and business-friendly”. General Secretary Xi Jinping said that even if urbanization reaches more than 70% in the future, there will still be 400 to 500 million people in rural areas [10].

The countryside must not become a barren countryside, a left-behind countryside, or a hometown in memory. In the informatization construction of government office halls, the information display and user interaction methods of administrative service agencies have transitioned from mouse, keyboard and other operations to simpler touch screen systems [11], inconvenient to use and other problems are also more prominent. Nostalgic for traditional culture and idyllic scenery, they want to know about the past and present life of the local area, do not like to accompany other tourists, and eagerly want to become a temporary member of the local area. It can be seen that the unique cultural traditions of villages are the main attraction of rural tourism and an important foundation for the development of rural tourism [12].

When Zhu Shengxuan said that in the next 20 years, China's national economic consumption will shift to leisure-based tourism products [13]; foreign experience in rural construction and development also shows that when urban economic development reaches a certain stage, the fierce competition atmosphere and the environmental problems brought about by industrialization [14], so that urban residents yearn for a quiet rural life and rural environment. It is conducive to integrating the relationship between economy, ecology, culture and aesthetics, and showing its multiple value functions [15]. Therefore, the rural tourism landscape design in the construction of beautiful countryside can not only meet people's spiritual and cultural needs, but also design tourism landscape products to meet people's material needs, so as to create a unique tourism experience for tourists [16].

The Quarterly Monitoring Report on China's Online Vacation Travel Market pointed out that the demand for travel

consumption has further increased. As the most popular travel product in the online travel market, the online vacation market has great development potential and room for development. It is expected that the growth rate will be in the coming will remain above 30.0% for three years. The scientific planning method is the key point to realize the integration of community development and tourism development. Donald G. Reid [17] and others wrote "Looking to the Future.

2. THE PROPOSED METHODOLOGY

2.1 The Intelligent Information Display Platform

A Community Approach to Rural Tourism Planning", which is a practical guide for community tourism planning. He proposed that the planning method must reflect the management function, and the community participation must be from the inside out. The construction of beautiful countryside brings new development opportunities to the countryside. It is mainly reflected in the following three aspects: (1) Protect the rural landscape ecology. The construction of beautiful villages is a great opportunity for villages to restore the environment and improve infrastructure. Through a series of measures, the villages have become poetic landscape homes. The development of rural tourism is conducive to encouraging farmers to strengthen the protection of rural culture and historical heritage. Numerous case studies abroad have shown that rural tourism can help enhance the pride of rural communities.

At present, the application of the scenario-based service mode of the government information interaction platform is still in its infancy. From the actual construction of the scenario-based service system of the government portal website in my country, there are still the following shortcomings: (1) Simple use of flash production or html pages to form scenario-based services, information Simultaneous updating cannot be achieved; the construction of beautiful countryside brings new development opportunities to the countryside.

It is mainly reflected in the following three aspects: (1) Protect the rural landscape ecology. The construction of beautiful villages is a great opportunity for the villages to restore the environment and improve the infrastructure. Through a series of measures, the villages have become a poetic landscape home. The enterprise information service is showing a vigorous development trend, covering almost all industries. Enterprise services can communicate with customers on the corporate website through network channels, or set up a suitable place to communicate directly with customers. my country's current enterprises are mainly small and medium-sized enterprises. Zhao's hometown is a typical poverty-stricken township, and Xiangfang Village is a first-class poverty-stricken village in Chongqing. The main industry type in Zhao's hometown is traditional agriculture. Although there are a few characteristic agriculture, in general, the internal structure of agriculture and the main forms of agriculture have not changed significantly, and the overall scale is small, which is a typical representative of the poor areas in the Wuling Mountains. The intelligent control system includes: gesture recognition control, body gesture recognition control and other modules.

2.2 The Development of Tourism Culture in Rural Construction

This comprehensive service building is a comprehensive service place that integrates information and consultation, management and coordination, complaints and supervision , is the main external service window of the enterprise and an important part of the construction of a service-oriented enterprise. Video performance refers to the video content played on the live large screens of all competition venues, and the design content of animations, icons and text displayed on the score screen.

For example, at the 2000 Sydney Olympic Games, the sports display team produced highlights of the day's games every day, and sent them to various venues for broadcast, which were highly praised by the audience. The skeleton data of the human body can be obtained by using the infrared somatosensory camera, and the skeleton tracking technology [3] establishes the coordinates of each joint of the human body by processing the depth of field data, and the skeleton tracking can determine each part of the human body.

Using the key modeling steps and fnal reductive model of GM (1,1), one may extract specifc local maximum values.

The development of rural tourism is conducive to encouraging farmers to strengthen the protection of rural culture and historical heritage. Many foreign case studies have shown that rural tourism can help enhance the pride of rural communities and protect rural cultural and historical heritage. These studies show that prior to the development of rural tourism, some unique cultural and historical heritage of rural communities were little known. For rural environments, "integrative thinking" is a system thinking mainly based on systems theory, and it is also a planning strategy.

The purpose of introducing the concept of integration is to re-understand the characteristics and connotations of the elements of the rural environmental system with integrated thinking, and through the ranking of the importance of the relationship between the elements. Community development and tourism development involve a multi-objective multi-subject relationship. Including environmental goals, social and cultural goals, economic goals and tourism demand goals, it involves both protection goals and development goals. The realization of each goal is based on meeting certain conditions. Taking a rural tourism base as the For example, with the support of the local government, the village has continuously intensified the construction of beautiful villages, and has made remarkable achievements in the construction of rural roads and communication facilities, providing a basic guarantee for the development of rural tourism activities.

The construction of rural tourism has updated the material form of the village, and the texture of the traditional village, the form of the traditional dwelling, the traditional agricultural landscape, and the rural ecological environment have also produced corresponding problems. The scale of traditional rural buildings and village spaces is generally adapted to the population density and activity behavior of local residents. In the process of rural tourism development, the cultural awareness of Sichuan farmers has gradually increased. And realize the importance of inheriting and protecting local cultural characteristics. The Tibetan, Qiang, Yi and other ethnic minorities pay more attention to protecting their own national culture. And in the development of rural tourism, pay attention to highlight the national cultural characteristics.

2.3 The Intelligent Framework Design of Tourism Culture Development in Rural Construction

The development of rural tourism helps farmers to form a healthy and hygienic lifestyle. Objectively speaking, the

original rural culture has infinite charm, but there are also many things in the traditional rural lifestyle and hygiene habits that are not conducive to social progress and human health. For example, with the increase of tourists in the village, the domestic garbage in the village has gradually increased, which not only exceeds the carrying capacity of the basic service facilities in the village, but even some rural scenic spots where some tourists discard domestic garbage at will, and some non-degradable garbage not only destroys the rural environment. The ecological environment also brings a lot of burden to clean up garbage for local residents far away from the urban area.

For rural tourism, the location is relatively remote and there are many tourism experience items, so it is difficult for tourists to experience all the tourism items in one day. Therefore, it is of great significance to do a good job in the landscape design of residential buildings, which can not only improve the landscape effect. The significance of the site originates from its positioning and self-identification in the environment, thereby pursuing the nature and characteristics of the site. The theory of the spirit of place divides the structure of the site into two points: "characteristic" and "spatial", and the characteristics include three basic categories: "natural", "human" and "spiritual". Summarize, extract, and learn from relevant research literature, under the guidance of many professors and associate professors in the field of tourism in the research group

This paper studies the key conflict performance of Zhao's hometown on multi-objective and multi-subject, and provides a factual basis for exploring the synergy between community development and tourism development. Provide 3D video display, guidance services and other functions. In order to more effectively improve the management level of the comprehensive service building and the efficiency of enterprise services, we have designed a set of architectural designs with multiple user interaction methods below. Achieving the revival of the countryside is not the only way to build small western-style buildings. The historical, artistic and scientific value of ancient buildings is the soul of beautiful rural construction. The protection and restoration design of traditional historical buildings does not mean to create or rebuild the original state at that time.

3. CONCLUSIONS

The practice of rural tourism development has proved that the government plays a very important role in protecting rural culture and ensuring the healthy development of rural tourism. First, protect rural civilization and adapt to update the physical environment of the village. Tourism is a service industry based on the consumption economy, but the updated design brought by rural tourism should be based on the principle of "adaptive design", and use modern technology and design concepts to restore the simplest rural life and agricultural production. With the current The popularization of intelligent information systems in all walks of life can effectively control the further development of the situation by providing early automatic alarms for events with major hazards such as fires.

4. REFERENCES

[1]Li Yijuan. Research on the new business form and design strategy of homestay based on rural tourism [D]. Hunan University.

[2] Gao Mouzhou. Analysis on the relationship between rural tourism development and rural cultural construction [J]. Business Times, 2008(15):3.

[3] Yin Yangchun. Research on the Interaction Mechanism and Collaborative Path of Rural Tourism and Beautiful Countryside Construction: Taking Sanhui Village in Cangxi County as an Example [D]. Chengdu University of Technology, 2018.

[4] Zheng Youfang. On Rural Cultural Construction and Rural Tourism Development [J]. Cultural Industry, 2018(24):2.

[5] Qin Yanling. Study on travel satisfaction of beautiful southern rural complex.

[6] He Lifang. Discussion on the construction of "beautiful countryside" based on tourism development orientation [J]. Land and Natural Resources Research, 2014(3):2.

[7] Ma Xinyu. The practice and research of public space design in Jinan Xiqiqiang Village under the background of rural revitalization.

[8] Tong Hui. A preliminary study on tourism-oriented rural planning and design [D]. Dalian University of Technology, 2018.

[9] Shen Zhi. "Local Chronicle + Tourism" / Helping the Construction of Political and Beautiful Villages [J]. Fujian Shi Zhi, 2018, 207(06): 3.

[10] Yin Yangchun. Research on the interaction mechanism and collaborative path between rural tourism and beautiful rural construction [D]. Chengdu University of Technology.

[11] You Zhi, Chen Jizhi, Tang Mengjun. Analysis of the planning and design of the development of rural tourism industry—taking Jingu Village of Yingshan County as an example [J]. Tourism Survey (Second Half Month), 2014(09):222.

[12] Li Qiuyu. Development strategy of rural tourism cultural resources.

[13] Huang Qixin, Zhou Xiao. Research on the Development Model of Country Houses Based on Cultural Authenticity [J]. Rural Economy and Technology, 2012, 23(012):68-69.

[14] Xu Hang, Zhu Quan. A review of research on tourism-oriented beautiful rural construction [J]. Architecture and Culture, 2017(11):3.

[15] Lv Qinzhi, Yang Xinyu. The practice of landscape environment design in Banshan Village aiming at developing rural tourism industry [J]. Journal of Zhejiang University of Technology: Social Science Edition, 2017, 16(3):7.

[16] Chen Dali. Exploration of the interactive mode between beautiful rural construction and rural tourism development—taking Huangshan City as an example [J]. Theoretical Research on Urban Construction: Electronic Edition, 2013, 000(024):1-10.

[17] Huang Qixin, Zhou Xiao. Research on the development model of rural homestays based on cultural authenticity [J]. Rural Economy and Technology, 2012, 23(12):2.

[18] Liu Fang. Research on the cultivation of business English talents in higher vocational colleges under the background of China-ASEAN Free Trade Area [J]. Campus English, 2019(18):2.

[19] Zhang Jing. Research on the "wisdom" classroom teaching mode based on team research and development projects: Taking the course "Basics of Economic Law" as an example [J]. Marketing, 2019(46):273-274.

[20] Yi Chunyan, Lu Huihui. A survey on the status quo of the foreign language education service industry in Guangxi facing ASEAN [J]. Journal of Taiyuan City Vocational and Technical College, 2019(9):4.

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Online Intelligent Display Platform for English Teaching Communicative Awareness in Vocational Colleges Based on Multi-Dimensional Cross-Cultural Data Information Mapping Algorithm

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Abstract:Aiming at the problems of low mining accuracy, slow running speed, and large memory footprint when mining complex and large-scale data sets in biological information networks, a multi-dimensional data mining algorithm for biological information networks based on association rule mapping is proposed. At the same time, it analyzes the current situation of English teaching in higher vocational colleges and the problems existing in cultural teaching, which leads to how to cultivate students' cultural communication awareness and improve students' cross-cultural communication ability in English teaching activities in higher vocational colleges. , The online and offline college English blended teaching mode of the network platform, and the online and offline college English blended teaching strategy of the network platform is proposed.

Keywords: Online Intelligent Display Platform, English Teaching Communicative Awareness, Multi-Dimensional Cross-Cultural, Data Information Mapping

1. INTRODUCTION

The State Council pointed out in the "Decision on Vigorously Develop Vocational Education": "Vocational education should serve to improve the quality of laborers, especially the professional ability." [1] This requires that the teaching of secondary vocational schools must aim at cultivating students how to master professional skills. ability for the purpose. With the continuous development of multimedia and network technology [2], multimedia data such as images, audios, and videos are constantly increasing. It is very difficult to effectively manage and query these data. However, using data mining technology with learning ability, it is possible to discover a large amount of data information by mining a large amount of data [3]. Effective clustering of multimedia data based on potential content features.

Biological information network refers to the use of mathematical methods, graph theory, network topology and other methods to study the network of biological information systems [4]. It includes biological science, mathematical models, computer science and other technologies. contacts and organizational structure. The new "Basic Requirements for College English Teaching" clearly states that college English courses are not only a basic language course. Therefore, it is very important to study the online and offline mixed teaching mode of college English on the network platform [5], which is not only the need for students to fully master the ability of listening, speaking, reading, writing, and translation, but also the need for college English teaching reform [6].

It is a quality education course that broadens knowledge and understands world culture, which is both instrumental and humanistic; English teaching workers are required to fully consider the cultivation of students' cultural quality and the imparting of international cultural knowledge when designing English courses. Ontology has been widely recognized as an important means of domain knowledge structuring [7]. In the fields of multi-agent systems, information integration, semantic web and knowledge management, ontology is considered to be an important theoretical basis [8]. According to Studder, ontology is a shared conceptual model A clear formal specification of [9]. Auralization is the expression of information with non-speech sound signals, that is, in order to facilitate communication and interpretation, the connection of data in the research field is transformed into a sensory connection expressed by auditory signals [10].

Hearing is a good visual aid, and part of the information of the CAD design analysis results is fed back through audio. Due to the different ecological [11], material, social and religious environments in which different ethnic groups live, their language environment produces different language habits, social culture, local customs and other contextual factors. Therefore, different cultural backgrounds cause people to speak differently [12]. The way or the habit is not the same. Biological information network refers to the use of mathematical methods, graph theory, network topology and other methods to study the network of biological information systems. It includes biological science [13], mathematical models, computer science and other technologies. contacts and organizational structure [14].

An efficient algorithm for mining approximate frequent items in data stream is proposed. The algorithm uses a deterministic ε-approximation method to accurately mine frequent items in data stream, and uses summary data to satisfy user's query [15], and effectively reduces the algorithm's complexity. Space complexity and average processing time, resulting in smaller frequency errors. First of all, as far as the teaching syllabus is concerned [16], the various foreign language teaching documents and syllabuses formulated by the Ministry of Education of the People's Republic of China emphasize the importance of learning foreign cultures, but these syllabuses are all formulated around language teaching,

and none of the syllabuses incorporate cultural education Raised to a position of equal importance with language teaching [17].

The online and offline college English mixed teaching mode oriented by the network platform is a supplement to the traditional college English teaching, and promotes the comprehensive improvement of students' listening, speaking, reading, writing and translation skills.

2. THE PROPOSED METHODOLOGY

2.1 The Multidimensional Cross-Cultural Data Information Mapping Algorithm

However, in an open environment such as the Semantic Web and multi-Agent systems, or when carrying out tasks such as information integration and knowledge management, such a "centralized" solution is obviously not advisable. In engineering analysis, audibility is widely used at home and abroad. There are also certain applications, such as in finite element analysis, numerical simulation of fluid mechanics and so on.

In the Exvis program at Louville University. Culture is the foundation of language. Over the years, although English teaching has continued to improve and innovate in teaching methods, the results are not so satisfactory: although the students trained can only read, can't speak, can only watch, and can't listen compared to the past. made great progress.

In this paper, the association rules of network data sets are determined based on the association mapping relationship of network data to improve the efficiency of data mining, and the frequency of data mining is obtained by the method of probability estimation, and the mining factor and relative error are introduced to improve the mining accuracy. According to the definition given above , below we describe the concept mapping problem. Given two or more ontologies, concept mapping means that for any concept $c \in O1$ in the ontology O1, an attempt is made to find one or more corresponding concepts in the ontology O2 such that both have the same or similar semantics.

When distinguishing data samples in the same subspace, it is necessary to formulate mining rules according to the degree of association of the data samples. When the data sets are located in different subspaces, it is only necessary to distinguish the subspaces according to the correlation properties of the subspaces. Teachers should not only pass the book course knowledge to the students, but also combine the book knowledge and use network education resources to mine relevant information. The knowledge of English is passed on to students together, broadening students' knowledge horizons, and then cultivating students' core English literacy. The above assumptions are the basis for our similarity measurement. The idea of the algorithm is to comprehensively weigh the similarity of each attribute of the concept, and then decide to what extent the two may have the same or similar semantic properties.

2.2 The Communicative Awareness of English Teaching in Vocational Colleges

The needs of social development. The frequency and diversity of international exchanges require that English learners must master certain customs and customs of the target language country in order to communicate with them smoothly. Otherwise, even if they are fluent in spoken language and have strong expressive ability, pragmatic errors will occur due to the lack of understanding of the cultural background of the target language country, and even misunderstandings will cause the other party's disgust. Than again, in terms of teaching, English teaching lacks the necessary innovation.

In addition to hidden social factors, the reasons for this phenomenon include the following specific reasons: inappropriate situational teaching arrangements, which are not conducive to classroom activities for dialogue exercises. Online and offline activities guided by network platforms The college English blended teaching model needs to do a good job of pre-class teaching preparation, and use the effectiveness of pre-class teaching to connect classroom teaching and after-class teaching mode, so as to realize the online and offline teaching mode. The preparatory work for college English pre-class teaching activities is divided into two parts. The architecture of CAD auralization can be divided into three parts: CAD geometric modeling and analysis and simulation, CAD analysis data and mapping, and the realization of system auralization. There are two main software data analysis interfaces.

For students who need to work in English after graduation, they do not understand the values and moral standards of Westerners. In order to verify the multi-dimensional data mining algorithm of biological information network based on association rule mapping proposed in this paper, the experimental simulation hardware platform used is: IBM's PC, clocked at 2. 3 GHz CPU. Course teaching hours are less and more content, cultural education and English courses are not closely integrated; classroom teaching concepts are outdated, teachers have not yet established the idea of "connecting culture and language"; students do not know enough about themselves, and do not pay enough attention to cross-cultural quality education, students in higher vocational colleges often put more experience in the study of professional knowledge due to the pressure of employment.

2.3 The Research And Development of Online Intelligent Display Platform For English Teaching Communicative Awareness

Memory usage under different numbers of data sets, the smaller the memory usage, the better the performance of the data mining algorithm, and the more suitable it is for mining actual large-scale data sets. Students who are not majoring in English in secondary vocational schools have fewer opportunities to contact British and American people, so the classroom becomes the main position for learning English. Teachers should make full use of this main teaching place. Language is the carrier of culture and the main manifestation of culture. Language develops with the development of a nation, language is an integral part of social and national culture, and cultural difference is an obstacle to cross-cultural communication.

Different nationalities have different cultures, histories, customs and customs, etc. Second, teachers pass the prepared educational resources to students, guide students to learn English knowledge independently with the help of English teaching resources, and exercise English skills after class, to have a comprehensive grasp of English knowledge, so as to enhance students' self-confidence in learning. The direct conceptual environment determines the intrinsic and most important extrinsic attributes of conceptual semantics. Therefore, it has a direct impact on conceptual semantic similarity. It is also noted that, In the attributes and sub-concepts of concepts, such as frequency, loudness, timbre,

etc.; the mining accuracy of the algorithm under different numbers of data sets, the larger the number of data sets, the better the mining accuracy can be maintained, which means that the mining algorithm is practical in practice. application effectiveness.

3. CONCLUSIONS

This paper proposes a simple edge-first dependency parsing algorithm, and uses it to perform dependency analysis on complex noun phrases. The object of the algorithm is complex noun phrases containing at least three words. We should learn from the research methods and achievements of some European and American countries. Under the organization of the Professional Education Committee, foreign scholars and experts should be invited to conduct research on the joint promotion of English teaching and cultural education. Concept mapping and ontology mapping are semantic web, knowledge management and It is an important topic in the field of data integration. This paper takes the assumption of conceptual similarity as the premise and the similarity calculation as the basic technology.

4. REFERENCES

[1]Yuan Qian, Yuan Mei. Research on the education of the consciousness of the Chinese nation's community in ethnic colleges and universities from the perspective of post-subjectivity theory [J]. Journal of Southwest University for Nationalities: Humanities and Social Sciences Edition, 2022, 43(2):7.

[2] Bi Chenhui, Xu Hang. Research on the cultivation of cross-cultural competence of English majors based on blended teaching [J]. 2021.

[3] Zheng Bing. Teaching Design of "Network Data Storage Technology" Course in Higher Vocational Education Based on "Evidence" in Multi-dimensional Space [J]. Quality Education in the West, 2021, 7(16):3.

[4] Xia Fei. An application method and platform for pharmaceutical R&D analysis based on intelligent data model: CN112133380A[P]. 2020.

[5] Liu Guoguang, Pan Ruifeng, Wang Hu, et al. A system and method for constructing an intelligent reporting robot based on multidimensional data: CN111159353A[P]. 2020.

[6] Liu Bo, Zhang Hongyan, Guo Jianxun, et al. Network Node Multidimensional Data Community Division Algorithm Based on Correlation Analysis: CN111062421A[P]. 2020.

[7] Ma Jing. Research and Design of Multi-dimensional Higher Vocational Teaching Quality Assurance Management System Based on Data Mining [J]. Modern Vocational Education, 2020(9):4.

[8] Wen Yamei. Research on the application of ESA teaching model of intercultural communicative competence in junior high school English reading teaching [D]. Inner Mongolia Normal University, 2020.

[9] Ji Gang, Zhou Yamin, Zhou Mengmeng, et al. An intelligent analysis method of student behavior characteristics based on multidimensional data: CN111325153A[P]. 2020.

[10] Xu Wei. A Comparative Study of iWrite 2.0 and Criterion Online English Writing and Evaluation System Based on Feedback Function [J]. English Square: Academic Research, 2022(14):3.

[11] Shen Jiafang, Qian Liping, Yang Chao. Non-orthogonal multiple access and multi-dimensional network resource optimization for energy-intensive relay narrowband Internet of Things [J]. Computer Science, 2022, 49(5):8.

[12] Li Jing. Problems and coping strategies in the development of adult higher education courses in the era of artificial intelligence [J]. Adult Education, 2022, 42(5):6.

[13] Cao Jialei, Xu Zongfeng. Multidimensional Poverty Alleviation Performance Evaluation and Coupling Measurement under Rural Revitalization Strategy [J]. Journal of Anqing Normal University: Social Science Edition, 2022, 41(2):8.

[14] Yu Jiahui, Liu Jiajing, Zheng Jianming. Research Situation of Multi-source Multi-dimensional Data Fusion: Theory, Method and Application [J]. Journal of Intelligence, 2022, 41(5):7.

[15] Zhu Shi, Zhu Xueyuan. Item Functional Differences in the English Writing Anxiety Scale: An Analysis Based on the Multidimensional MIMIC Model [J]. Foreign Language Research (Series), 2021(2):9.

[16] Liu Shimin, Sun Xuemin, Lu Yuqian, et al. Knowledge-driven digital twin mimicry modeling method for processed products [J]. Chinese Journal of Mechanical Engineering, 2021, 57(23):13.

[17] Xia Fengxia. An artificial intelligence-based multidimensional data model information processing system and method: CN111583488A[P]. 2020.

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Research on Artificial Intelligence Fusion of Machining Design and Manufacturing

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Abstract: With the continuous research and development and progress in the field of science and technology in our country, mechatronic engineering has been widely used in various industries. Traditional mechatronic engineering has been difficult to meet the needs of emerging industries with rapid development. Under the background of information technology application, mechatronic engineering is also developing in the direction of informatization and intelligence. At present, the integration of artificial intelligence technology into the application of mechanical and electronic engineering has become a key research and development project of related technologies. Take more complete optimization measures, so that the effect of mechanical design and manufacturing can be comprehensively improved. The mechanical design industry is an important foundation for my country's social and economic development, and it has brought new development prospects for the mechanical design and manufacturing industry under the background of the advent of informatization.

Keywords: Artificial Intelligence, Machining Design, Manufacturing

1. INTRODUCTION

With advancements in information and intelligent technology, traditional mechanical engineering has undergone significant improvements. With the research and development of information technology, artificial intelligence came into being. Following the pace of the times, artificial intelligence is also integrated into mechanical and electronic engineering. In the past, there was a problem of unclear model calculation in mechanical design and manufacturing. To improve the overall design and manufacturing effect, artificial intelligence technology should be used to solve this problem. Make the entire network environment more secure and efficient, speed up information and data processing, and establish matching design schemes based on network searches, so that the level of mechanical design and manufacturing can be comprehensively improved to meet the development needs of modern industries. In the traditional mechanical design and manufacturing process, many links require manual trial and error before the design can be finalized and put into large-scale production.

In the whole process, labor consumption is very large, and the possibility of error due to manual operation is also very high. The integration of emerging electronic technologies and mechanical engineering has played a crucial role in its development. In many aspects of mechanical design and manufacturing, based on powerful intelligent technology and information systems, more scientific and reasonable precise design and testing can be achieved. No longer requires too much manual participation and operation.

Due to the characteristics of nonlinearity, adaptability, concurrency and storage, neural network technology has the following functions artificial intelligence has emerged as a result of research and development in information technology. To overcome the issue of unclear model calculation in mechanical design and manufacturing, artificial intelligence should be employed to improve overall design and manufacturing: (1) It can conduct large-scale information and data induction processing on products, and screen out useful Valuable information and store it to facilitate the latter to learn and inherit; (2) Because of its strong intelligence and automation characteristics, it is often used in mechanical fault diagnosis to automatically conduct in-depth analysis and reasoning on problems in mechanical faults , can accurately diagnose the cause of the fault; (3) can reasonably control the positioning of the machine tool, reduce errors, and realize automatic control and processing; (4) can automatically identify targets, have strong anti-interference ability, and perform working condition detection and control wait.

The mechanical and electronic products obtained through the integration of mechanical technology and electronic technology have a relatively simple basic structure, which can minimize the volume of the product, comprehensively improve the functional characteristics of mechanical engineering products, and change the complex and cumbersome structure of traditional mechanical products. pattern. Take more scientific solutions, and can handle them automatically, skipping the link of manual operation and review, and comprehensively improve work efficiency and accuracy. In actual work, relevant R&D personnel need to do a good job in technical research and combine different technical solutions according to actual production needs and industry development standards to comprehensively improve the overall design effect.

2. THE PROPOSED METHODOLOGY

2.1 The application role and development prospect of artificial intelligence technology in mechanical manufacturing

In the application of intelligent technology, the requirements of energy conservation and environmental protection should be considered to avoid certain impacts on the surrounding environment, to optimize the overall working mode and process. The application in mechanical design and manufacturing is to convert the data analysis and processing results into mechanical operation instructions after fast and accurate processing of relevant data information, and automatically complete mechanical operation tasks. The third is that the so-called neural network technology imitates the

nervous system of the human body to a certain extent. Based on the neuron reflection characteristic skills of this technology, the extraction and processing of data analysis results can be realized automatically, and the preservation and protection of data information can also be realized. , just like our human body, based on our huge nervous system, can perceive instructions, accept instructions, and perform corresponding operations according to instructions, and remember instructions.

The application of artificial intelligence technology to machinery manufacturing has made the machinery manufacturing industry digital, automated, and intelligent, which has promoted the production efficiency and quality of the machinery manufacturing industry to a certain extent, and then promoted the development of the manufacturing industry. To better apply artificial intelligence technology to machinery manufacturing and make it serve human beings, we must rationally deploy technical personnel, strengthen the research level of artificial intelligence technology, optimize, and improve the manufacturing process with scientific knowledge, and realize artificial intelligence. The perfect combination of technology and machinery manufacturing promotes the development of machinery manufacturing.

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2.2 Specific application of artificial intelligence technology in mechanical design and manufacturing

The fault diagnosis system includes a fault case library and a fault reasoning library, etc., and innovates the overall construction and manufacturing scheme based on model diagnosis and case reasoning to ensure the accuracy and efficiency of the design. In actual operation, the designer needs to check the entire mechanical design and manufacturing plan through the man-machine interface, and quickly complete the information entry. The system needs to check the design plan by searching the corresponding information in the database according to the analysis and judgment functions. Whether it is very scientific and feasible, and then combine the adjustment results with similar cases to analyze the scientific nature of the current mechanical design scheme. In the end, a lot of suggestions are provided to the relevant designers, and the design scheme is enriched to improve the overall design effect. After the artificial intelligence automatic identification technology is applied to by enhancing the network environment's security and efficiency, accelerating information and data processing, of the corresponding parameters of the electromechanical equipment. Once abnormal parameters are detected, the alarm mechanism of the system will be automatically triggered, and automatic shutdown will be realized at the same time.

When the staff received the alarm, they immediately cut off the power supply for inspection. It not only ensures that the staff can work in a safe environment, but also ensures the timely discovery and processing of abnormal data information. Artificial intelligence technology has achieved important development at an extremely fast speed in mechanical manufacturing, which is of forward-looking and innovative significance. As we all know, talents are the core competitiveness of a country and a local development, and as an important supporting force for the development of machinery manufacturing, the number and level of talents determine the industrial level of a country to a large extent. In this case, whether it is an enterprise or a country, it is necessary to pay attention to the cultivation of relevant talents, establish a sound assessment mechanism, and provide stronger support for the application of artificial intelligence technology in the field of machinery manufacturing. In the actual application process, the mechatronic engineering system is a relatively complex engineering system involving many fields, and a single simple linear system cannot express the mechatronic engineering.

However, accurate mathematical expressions have difficult solutions in the nonlinear expression process and can only analyze and solve the most basic simple systems. Therefore, integrating artificial intelligence technology into mechanical and electronic engineering systems can be very good. solve this difficult expression. Secondly, in the current mechanical design and manufacturing, it is inevitable that there will be complex dynamic models. It is difficult for some mechanical engineers with poor adaptability to make basic judgments and find hidden safety hazards in manufacturing. Therefore, in actual work, it is necessary to ensure the smooth progress of follow-up design work through the scientific use of artificial intelligence technology and reduce the probability of safety accidents through the supervision and management of the whole process, and developing matching design schemes based on network searches, mechanical design and manufacturing can be comprehensively improved to meet modern industry's development needs. Manual trial and error in several links of the traditional mechanical design and manufacturing process is necessary before finalizing the design for large-scale production, analysis, summary and memory of relevant fault information and cases in mechanical design and manufacturing, which improves the speed and accuracy of fault warning and fault retrieval. The application operation of the fault diagnosis system in mechanical manufacturing design is generally: the user sends a real-time monitoring instruction to the system through human-computer interaction; after the system receives the instruction, it conducts accurate analysis and judgment on the instruction information combined with the data information in the database; and then According to the diagnosis results, the system will automatically realize the reference and comparison with the relevant case information in the database, and determine the fault problem based on accurate diagnosis. In terms of the effectiveness of mechanical and electronic engineering processing, artificial intelligence can take a greater advantage. Processing various aspects of data has gradually replaced traditional mechanical engineering.

Artificial intelligence uses fuzzy reasoning or neural network system simulation construction. In terms of data and information storage, through the rules of fuzzy reasoning, the distribution of neural networks is the main method, combined with the establishment of fuzzy neural network models, and different data in mechanical and electronic engineering are processed. Efficient processing effectively achieves rapid

analysis and transmission of mechatronic engineering data. Due to the complexity of the mechanical manufacturing process, if there is a deviation in a certain link, it will affect the smooth progress of the overall work, and there will be many influencing factors. Therefore, in actual work, it is necessary to cooperate with artificial intelligence technology to ensure on-site safety. Management will kill the influencing factors in the cradle and improve the safety factor of the site. In specific work, artificial intelligence technology can be used to carry out scientific testing of on-site operation links, which can not only reduce the workload of relevant personnel, but also help to ensure the safe operation of personnel, effectively improving the current safety management effect.

3. CONCLUSION

To sum up, with the continuous development of modern informatization and science and technology, there is a situation of mutual integration with information intelligence technology in various industries, and mechanical and electronic engineering is no exception. Engineering opens new fields of development. Continuously improve the overall design scheme, realize the supervision and management of the whole process, and then provide important suggestions for on-site production and manufacturing through artificial intelligence technology, so that the mechanical design and manufacturing industry can develop in the direction of modernization.

4. REFERENCES

[1] Wang Biao Dou Junlin Design of Physical Education Li Lilei, Wu Hongliang. Research on the relationship between mechanical and electronic engineering and artificial intelligence [J]. Theoretical Research on Urban Construction: Electronic Edition, 2016, 000(011): 4121-4121.

[2] Xia Jing. Application of artificial intelligence technology in large-scale machinery manufacturing [J]. Electronic Technology and Software Engineering, 2019(17): 2.

[3] Zou Xiang. Design and Implementation of Machining Collaborative Collaboration Platform [J]. Digital Communication World, 2018, No.157(01):207.

[4] Wang Gaochao. The necessity of establishing a new undergraduate major of material forming and control engineering and the conception of talent training mode.

[5] Zhang Yuan, Li Mingfu, Li Yulin, et al. The research progress of artificial intelligence in the technological upgrading of pepper processing equipment [J]. Modern Agricultural Equipment, 2014(3):4.

[6] Zhang Jianfeng. Analysis on the characteristics and application of automatic machining technology [J]. Nanbeiqiao, 2019, 000(022):76.

[7] Xia Xiaoyun. Research and implementation of key technologies for health status monitoring of CNC machine tools [D]. University of Chinese Academy of Sciences (Shenyang Institute of Computing Technology, Chinese Academy of Sciences).

[8] Jiang Congshou. The characteristics of modern automobile manufacturing technology and miniature automobiles [J]. Automobile Research and Development, 1994.

[9] Song Lijun; Intelligent monitoring and organizational regulation of additive manufacturing of metal materials [C]// Intelligentization and precision of special processing technology - the 17th National Special Processing Academic Conference. 2017.

[10] Xi Qihai. Evaluation of the third-line construction from the perspective of combining history and reality [J]. Research on Chinese Economic History: Beijing, 2015.

[11] Intelligent Manufacturing Network - Helping China's Manufacturing Innovation - idnovo.com.cn. Analysis of Several Mainstream Rapid Prototyping and Rapid Manufacturing Technologies [J]. Intelligent Manufacturing Network - Helping China's Manufacturing Innovation - idnovo.com:cn.

[12] Han Liguang, Cao Wenxing. An Artificial Intelligence Type Machining Production Line: CN109249265A[P]. 2019.

[13] Wang Shangyin, Jia Jun, Sun Ruixia. Research on Artificial Intelligence Machining Center Robots [J]. China Information Technology, 2019(10):4.

[14] Tang Yiqing. The application of artificial intelligence in mechanical processing and automation [J]. Hunan Paper, 2022(002):051.

[15] Tao Lu. An automatic testing equipment for mechanical processing based on artificial intelligence: CN112683659A[P]. 2021.

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Application of Management Accounting Practice Training Evaluation Software under Accounting Transformation Based on Intelligent OCR Data Clustering

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Abstract:An intelligent projection system based on OCR technology is proposed. Collecting data through cameras, OCR technology recognizes and processes text, so that intelligent OCR has functions such as mobile terminal adaptation, multi-task detection, whole line recognition, image segmentation, positioning, and classification. The application scenarios are more extensive. Text and card identification will be more efficient. Based on the perspective of financial sharing, this paper uses the method of grounded theory to analyze the accounting transformation case of Hebei LT Company. The study found that the two core categories of organizational process transformation and information system construction promoted process reengineering, efficiency and cost, and information construction.

Keywords: Management Accounting, Practice Training Evaluation, Accounting Transformation, Intelligent OCR Data Clustering

1. INTRODUCTION

In recent years, the rapid development of new technologies such as mobile internet and big data has forced the transformation of traditional industries to the direction of intelligence and mobility [1-2]. With the gradual spread of operation intensification and digitization, especially the artificial intelligence technology represented by OCR recognition and data mining gradually penetrates into business scenarios, students in accounting classes of secondary vocational schools have completed "Basic Accounting" during their school days [3]. Core courses such as "Enterprise Financial Accounting", "Comprehensive Accounting Study", "Cost Accounting", etc., before graduation, in addition to mastering the basic job skills of each accountant, but also mastering comprehensive job skills. Bring continuous economic benefits and brand effects to users [4].

Therefore, how to effectively apply financial software in accounting teaching to cultivate accounting informatization talents has become a subject that must be studied [5]. This paper analyzes the application of financial software in accounting practice teaching and points out the problems and causes. Since the 1980s, the financial sharing center of Ford Motor Company in the United States has been established and started to operate in Europe [6]. Now a large number of multinational groups and large groups around the world have established and operated financial shared service centers.

After accenture conducted an in-depth investigation of more than 30 European multinational enterprise groups that implement the financial sharing model [7], with the continuous improvement of the level of social and economic development, enterprises have paid more attention to management accounting work, and the transformation of enterprise financial accounting has become an enterprise financial management. necessary for development. Changes in the market environment, enterprises will generate a large amount of data in the operation and production [8].

Multinational enterprises need management accounting under the situation of financial sharing. With the in-depth financial sharing within the enterprise, cloud computing, artificial intelligence and other technologies have gradually emerged [9], which significantly accelerates the speed of data processing and presents a variety of methods. In the new era, financial accounting is gradually transforming into management accounting, which can promote the development of enterprises [10]. The specific advantages mainly include the following: First, the transformation of management accounting can scientifically apply the financial funds of enterprises and clarify the actual use of various financial funds. Enterprises can analyze and study the annual financial capital income and expenditure and improve the next year's financial income. It can be seen that the management accounting philosophy pays special attention to the improvement of the economic benefits of the enterprise [11].

In addition, the relevant conclusions of financial accounting can also support financial management and financial reporting, assist management to formulate company policies and strategies, and organize the implementation of various decision-making programs [12]. However, due to the habit formed by people's long-term dependence on paper culture, the traditional media industry still has the possibility to survive, and this requires it to fully improve its innovation, integrate with modern technology [13], and create "High-tech" paper culture. It is necessary to strengthen management innovation and actively build an intelligent library and information service platform [14-15] to meet the individual needs of readers [16].

Whether it is a university library or a public library, it is necessary to strengthen the construction of the basic capabilities of artificial intelligence, and to connect with the internal information system of the library. The project teaching method is based on the idea of constructivism. Teacher-led learning is the main line, and students' autonomous learning practice is the main body [17]. Through

the joint implementation of a complete project work, teachers and students complete the teaching method of teaching tasks in the process of project implementation [18]. It has made great contributions to the development of accounting informatization in my country. The accounting education and teaching in colleges and universities also plays a very important role in promoting the promotion and popularization of accounting informatization [19].

2. THE PROPOSED METHODOLOGY

2.1 The Intelligent OCR Data Clustering

Most colleges and universities with accounting majors incorporate accounting informatization teaching into their teaching plans and offer accounting informatization (computerization) courses. The teaching materials of traditional accounting practice teaching are outdated and cannot adapt to the development of modern informatization. The traditional practical teaching is still at the level of manual operation. Whether manual operation is divided into posts or comprehensive training, due to the limitation of props and teaching materials, when people read newspapers and magazines, adding dynamic videos of relevant news is undoubtedly a great innovation. point. Through the existing OCR core technology, the keyword identification and search of newspapers and periodicals can be realized, and the intelligent projection of related videos on newspapers and periodicals can be realized.

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The industry domain analysis completely relies on the binary image obtained by image binarization. The effect of scanning documents is acceptable, but it is difficult to obtain a good binary image when shooting with a mobile phone or a high-speed camera. This intelligent projection system consists of micro-Cameras, OCR word recognition processing software, small projectors and related embedded chips constitute a portable mobile device. The portable mobile device composed of this system can be hung on the chest or made into a hat and other equipment, so that the camera and the projector can conveniently shoot the headlines on the newspapers and project the related videos on it. Deep learning algorithms can effectively avoid the shortcomings of traditional OCR identification, form more abstract high-level representation attribute categories or features by combining low-level features, mine the distributed feature representation of data to formulate multiple feasible solutions; evaluate solutions and make choices.

2.2 Management Accounting Practice Under Accounting Transformation

Deterministic decision analysis techniques include using the differential method to find the maximum value and using mathematical programming, etc., and the commonly used risk-based decision analysis techniques include the expected value method and the decision tree method. Financial control is closely related to the project construction plan and comprehensive plan. It goes deep into the production line, understands the construction progress of the project department, formulates various cost standards, and organically combines the financial budget with the production budget.

Comprehensive financial management conducts in-depth synthesis of uncertainty in conclusions. The uncertain decision-making step is to select a maximum profit value from each scheme, and then select a maximum value from these maximum profit values, and the scheme corresponding to the maximum value is the selected scheme. OCR positioning and identification based on deep learning through convolutional neural network CNN, recurrent neural network RNN, long short-term memory network LSTM technology, can realize automatic positioning of text area and recognition of whole line text on grayscale image.

On the one hand, the new financial software has broken the limitations of the traditional accounting processing system. Through the coexistence of various functional modules, its functions have been gradually expanded to include financing, investment, financial analysis, supply, sales, salary, and other aspects of the enterprise. In terms of management, it provides information services for the management departments of enterprises and institutions at all levels, at the same time, in the accounting module. The trend of enterprise financial management is toward full-staff, automatic intelligence, multimedia, social business integration, and three-dimensional financial information. comprehensive direction of development.

2.3 The Accounting Practice Training Evaluation Software Design

The ability of traditional occupations is challenged by technology. Starting from the creation of precise and refined marketing projects, Hebei LT Company has built a technologically advanced information service network. Using big data technology to manage and control market activities with marketing projects as the carrier and set up 20 post-evaluation indicators of profitability. The inconsistency of information between internal departments of the enterprise will have a direct impact on the construction and use of the financial sharing model. Therefore, in the process of transformation, enterprises are required to build a unified information sharing system, focusing on the financial department, and through the trace management model, it is very important to enhance the management awareness of the flow of funds in other departments in the information age, and corporate financial management leaders should respond to the transformation of management accounting Improve the degree of emphasis, after systematic study of management accounting knowledge.

The inconsistency of information among the internal departments of the enterprise will affect the construction and application of the financial sharing model. Therefore, in the transformation stage, it is necessary to build an internal integrated information sharing system. Focusing on the financial department, through the trace management form, the

capital trends of other departments will be implemented. Cost management will be implemented to control the source and reduce costs. Introduce the concept of value engineering, with the help of target cost management tools, in accordance with the principles of "easy to understand, easy to calculate, easy to declare, easy to evaluate". In the accounting computerization course. The teacher used a modular teaching method to teach the teaching content of each sub-project. Each student completes the operation of each sub-project independently under the guidance of the teacher. Basic familiarity with the operation process and main functions of accounting software.

Teachers cannot normally guide and help students to further improve the application ability of financial software in practical teaching, so that these experiments and practice projects cannot achieve the expected results well. Some schools have tried to invite teachers with majors related to accounting informatization to guide accounting experiments and internships. Make the provincial company accounting department the leader of the entire provincial company accounting work.

Concentrate on professional financial work with strong management such as investment and financing, tax policy and planning, internal audit and risk control, accounting process standards and specification formulation. As the first step in the transformation of management accounting, enterprises and related industries should implement relevant the accurate implementation of management accounting policies plays an important role in the transformation of my country's management accounting market.

3. CONCLUSIONS

The intelligent OCR technology based on deep learning has the advantages of higher recognition accuracy, faster speed, no format dependence, and support for rapid privatization deployment. Deep learning algorithms and model building are also the key to OCR applications. With the continuous evolution of intelligent OCR technology, the establishment of a financial shared service center requires the support of a complete and secure information system to realize the synchronization of business flow, accounting information flow, physical logistics and value flow. Therefore, only the application information system construction of enterprises can realize data integration.

4. REFERENCES

[1]Liu Guangqiang, Gan Shengdao. Intelligent management accounting report under the background of new economy - based on "blockchain + artificial intelligence" digital skills [J]. Finance and Accounting Monthly, 2022(14):7.

[2] Zhou Shimei. Research on the Transformation of Financial Accounting to Management Accounting in the Intelligent Era [J]. Small and Medium Enterprises in China, 2022(6):3.

[3] Kong Fanyi. Research on the transformation of financial accounting to management accounting based on artificial intelligence [J]. Today's Fortune (China Intellectual Property), 2020(05):144-145.

[4] Zhang Caixia. Problems and countermeasures in the application of management accounting in enterprises [J]. Modern Economic Information, 2021(13):65-65.

[5] Chen Lin. Discussion on the transformation from financial accounting to management accounting based on the trend of artificial intelligence [J]. 2020.

[6] Hao Xiuyan. Thinking and Analysis of Transformation from Financial Accounting to Management Accounting Based on the Age of Artificial Intelligence [J]. 2020.

[7] Zhang Caixia. Problems and Countermeasures in the Application of Management Accounting in Enterprises [J]. Global Market, 2021(13):65-65.

[8] Du Wanting. Transformation from financial accounting to management accounting in the context of artificial intelligence [J]. Wealth Life, 2022(8):3.

[9] Chen Jiru. A review of research on the transformation of financial accounting to management accounting in the context of artificial intelligence [J]. Quality, 2020(3):1.

[10] Li Jin. Analysis of measures to transform financial accounting to management accounting from the perspective of artificial intelligence [J]. Enterprise Reform and Management, 2020(7):2.

[11] Wang Xin. Research on the application and practice of management accounting in state-owned enterprises [J]. Today, Business Circle, 2022(6):4.

[12] Liu Xuedian. A brief discussion on the transition from financial accounting to management accounting in the era of artificial intelligence [J]. Quality and Market, 2022(9):3.

[13] Gu Mei. Research on Several Issues in the Transformation of Financial Accounting to Management Accounting in the Age of Artificial Intelligence [J]. Quality and Market, 2022(11):3.

[14] Zhao Tao. Research on the transformation of financial accounting to management accounting in the era of artificial intelligence [J]. Bohai Rim Economic Outlook, 2022(2):3.

[15] Lan Zhiqing. Strategies for the transformation from financial accounting to management accounting in the era of artificial intelligence [J]. Contemporary Accounting, 2022(5):3.

[16] Yu Bo. The application and implementation of enterprise management accounting based on value creation [J]. Business Culture, 2022(16):3.

[17] Xu Lei. A brief discussion on the transition from financial accounting to management accounting in the era of artificial intelligence [J]. Public Investment Guide, 2022(8):3.

[18] Jiang Shurun. Construction of the transformation model from financial accounting to management accounting in the era of intelligence [J]. China Industrial Economics, 2022(6):3.

[19] Jing Meihua. Research on the transformation of enterprise financial accounting to management accounting in the era of artificial intelligence [J]. Quality and Market, 2022(9):

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Research on Smart Sports Training Platform Based on Data Post-Processing Algorithm of Gasp Frequency Signal Acquisition Instrument

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Abstract:This study proposes a design of a "Microwave Heart Rate (456) and Respiratory Rate (57) Telemetry Monitor" using electromagnetic waves as the sensing medium. An experimental prototype using this scheme has been developed successfully. ; Using the characteristics of wavelet analysis self-adaptation and multi-resolution analysis, the extracted area signal is denoised to eliminate signal burrs (local extreme points). The system uses Kinect to obtain human color video and depth data, respectively. Motion data of users under two Kinects. Since the joint points of the human bones obtained under the two Kinects are relative to the current coordinate system, the least squares method is used for coordinate calibration, and then the Kalman filtering algorithm is used for data fusion.

Keywords: Smart Sports Training, Data Post-Processing, Gasp Frequency, Signal Acquisition Instrument

1. INTRODUCTION

Human heart rhythm 456 (4FI-K 5FIK 6LSKL9) and respiratory rate 57 (5-FIKL 7-FUCF>NS) information is of great significance for clinical medical diagnosis and nursing, in hospital emergency room [1], operating room, intensive care unit, etc. Widely equipped with "patient monitors" for monitoring human information such as heart rhythm, respiration, blood pressure, etc. [2] Breath detection is an important topic in the field of medical research. There are many researches on human breath detection at home and abroad. In 2006, Myoungho Lee of Yonsei University [3], South Korea, etc. used ultrasonic sensors to measure human respiration, and obtained a two-dimensional signal of respiration [4].

This method has high accuracy for the detection of breathing [5], but it adopts a contact method, which has its limitations in the detection of animals and is not suitable for large-scale breeding of pigs. Existing respiratory protection products or oxygen supply Most of the systems are continuous air supply [6], high power consumption and the airflow generated by the continuous direct blowing method can easily cause discomfort to the user. Under normal conditions [7], the lung exercise cycle of the same person tends to be stable, and parameters such as respiratory rate remain basically unchanged under the same state [8]. Based on this, the author proposes a way to record the air supply based on the prior value of the human respiratory rate. As my country's national intangible cultural heritage, Taijiquan has been promoted and developed all over the world [9]. And showing a booming trend. However, the traditional Taijiquan learning adopts the methods of reading books and teaching by teachers, etc., there are problems such as subjective assumptions, difficult to judge whether the movements are standardized, and difficult to display data intuitively [[10]. With the development of current intelligent technology, intelligence has penetrated deeper and deeper into people's lives, which has had a profound impact on people's lives [12].

As a sport to improve people's physical fitness, its importance is self-evident. With the change of people's concept of life [13], people began to strengthen physical exercise. At the same time, with the advancement of intelligent technology and information technology, sports and these technologies have begun to integrate continuously. At the end of the last century [14], the MES production execution system to solve this problem came into being. MES system is a new generation information system for enterprise production management. It aims to improve production efficiency, reduce production costs, shorten delivery time, and improve customer service [15]. It uses computer networks to connect various automation islands, and uses information technology to manage and optimize the overall production process, starting from product orders [16]. From the point of view of information collection, the patient monitor is a signal collection instrument that extracts human life movement information through sensors [17]. The extracted signal is processed by amplification, noise elimination and calculation, etc., and becomes valuable medical information. Provided to doctors as an important basis for diagnosing conditions and determining nursing measures [18].

In 2011, Song Kui from Chongqing Medical University and others used the non-contact method of laser ranging to measure the patient's respiration for sensitive parts of the human body [19]. However, due to the limitation of pig house environment and conditions, it is difficult to apply it to pig breath detection. In this paper, the hot wire flow sensor is used to detect the human breathing signal [20]. The sensor adopts the circuit working principle of constant temperature difference, and the structure mainly includes heating elements, air temperature compensation resistors, operational amplifiers, etc. Most of the research on Kinect sports-assisted training has been developed with a single Kinect [21]. Most of them are based on small-scale studies such as table tennis, badminton, yoga, and pull-ups [22]. For the large-scale movement of Tai Chi, a single Kinect cannot obtain accurate bone point data, and there is a problem of occlusion. With the development of current intelligent technology [23], intelligence has penetrated deeper and deeper into people's lives, which has had a profound impact on people's lives. As a sport to improve people's physical fitness, its importance is

self-evident. With the change of people's concept of life, people began to strengthen physical exercise [24]. At the same time, with the advancement of intelligent technology and information technology, sports and these technologies have begun to integrate continuously. Accurate and complete real-time data is the basis for running this MES-based data mining tool. Some data mining results are premised on the accurate measurement of the required parameters. The correctness of data collection directly affects the results and data of online calculation. The normal operation of the mining system.

2. THE PROPOSED METHODOLOGY

2.1 Gasping Frequency Signal Acquisition Instrument Data

According to the current commercial product advertising materials, the sensors used in the patient monitor are all contact-type, and most of them use ECG probes (A'FNK-, N JFIT) pasted on the human skin to obtain ECG signals, using impedance The sensing band (6FM+, -IK, &> 5IMF) surrounds the body's thoracic cavity to obtain breathing signals, etc. In this paper, a method of area feature operator with greater correlation with respiration and better stability is proposed to detect the respiration of pigs. After obtaining the two-dimensional signal of pig respiration, wavelet analysis was used to optimize the signal, and the peak point detection algorithm was used to obtain the pig's respiratory frequency, which was finally converted into respiratory frequency. This method can replace traditional manual counting.

Linearization is achieved by microprocessor and software in order to produce reproducible flow rate profiles. The heating wire is a section of the bridge. When the flow rate changes, the temperature, impedance and current changes of the heating wire cause the bridge circuit to be unbalanced. The flow rate can be converted according to the output voltage change. Motion capture technology is a technology that can measure the motion of moving objects in three-dimensional space. At present, it has applications in human-computer interaction, medical treatment, animation production, sports training, etc. Motion capture technology is based on the principles of computer graphics, using sensors and motion capture devices. Provide users with functions such as motion posture analysis, so as to realize human motion analysis based on computer vision. Specifically, the input part of the system mainly inputs the body motion image sequence of athletes and coaches into the auxiliary sports training system through Kinect image acquisition; the auxiliary sports training system first detects the input image sequence and constructs a human body contour map. Data mining technology It is the result of people's long-term research and development of database technology.

At first, various commercial data were stored in the computer database, and then developed to query and access the database, and then developed to the instant traversal of the database.

2.2 The Signal Acquisition Instrument Data Post-processing Algorithm

The microcontroller STC12C5A60S2 acts as the core controller to receive the data uploaded by the temperature sensor DS18B20 and the flow sensor AWM720. After analysis and synthesis, it controls the start and stop of the fan, and uploads the sensor data to the host computer for real-time display through serial communication. Provides depth data, color video, audio data. It has functions such as motion capture, image recognition, speech recognition, skeleton tracking, and image recognition.

Using Kinect, the original data stream can be detected, and the user's skeleton data information can be obtained, which can be combined with Taijiquan movement to meet the requirements of motion capture technology in the user's Taijiquan training process. Then, according to the corresponding algorithm, the joint angle trajectory of the athlete and the coach during limb movement is calculated. Finally, the calculation results are compared and the similarity is calculated. The obtained joint angle trajectory and posture similarity results are displayed to the system user through the output module. Provides auxiliary functions such as printing. Human motion capture is an important means to obtain human motion data. In the optical motion capture system, it generally includes a data acquisition part and a data processing part. The data processing part is mainly divided into data noise processing, scattered data matching and missing points. deal with.

At present, domestic and foreign scholars have carried out a lot of research on some problems in motion capture data processing and achieved fruitful results. Association analysis: Association rule mining was first proposed by rakesh apwal et al. There is a certain regularity between the values of two or more variables, which is called an association. Data association is an important class of discoverable knowledge that exists in the database. Associations are divided into simple associations, temporal associations, and causal associations.

2.3 The Research on Smart Sports Training Platform

The STC12C5A60S2A/D is converted on the P1 port. After the power-on reset, the P1 port is a weak pull-up type A/D, and the output of the flow sensor is connected to the P1.0 pin. The chip ADC is a successive comparison ADC, which consists of a comparator and a D/A converter. Through successive comparison logic, starting from the highest bit, the user motion database is established according to the skeleton point fusion data obtained by the two Kinects. Test sequences and standard sequences can be constructed according to the skeletal point coordinates of the Taijiquan movement of the user and the standard instructor. Relevant rules and evaluation scores are specified in advance. The joint data extraction needs to firstly apply the generator UserGenerator, which detects the appearance and departure of characters through callback functions.

The callback function NewUser corresponds to the appearance of the character, and the callback function LostUser corresponds to the departure of the character. Requirement analysis is an important step in system design, and the analysis result directly affects the realization of the project. The requirement analysis of the real-time data preprocessing system is to obtain the needs of the users of the system to solve practical problems. The analysis of system requirements needs to master the basic concepts, methods, means, evaluation standards, risks and other related knowledge of requirements. The marking points are set to be symmetrical from left to right and from front to back to facilitate subsequent data processing. The points enclosed in a closed pentagon in the figure are marked points set on the desktop, and their positions remain unchanged during the motion capture process, which is the reference for the later data processing time base coordinate system setting. (, the marked points are set on both sides of the joint, and the left and right are symmetrical, and the connection between the

marked points reflects the rotary motion of the joint during the movement process; (, the marked points are set on both sides of the joint, and the left and right are symmetrical, and the connection between the marked points is in the The rotational movement of the joint is reflected in the movement process. It can be seen from the above formula.

The electric field at a certain point in the space outside the sphere is a function of the radius 0 of the sphere, the permittivity #, $ and the wave vector &. Assuming that the human heartbeat and breathing motion cause the equivalent radius 0 to change periodically with time.

3. CONCLUSIONS

The feature extraction of the target image constructed in this paper has a certain feasibility, and the key joint information of the moving human body can be extracted, and the difference between the standard action and the sports action can be compared with the aid of the auxiliary system. However, in the realization of the auxiliary training system in this paper, the components of higher harmonics are relatively complex; in addition, the heartbeat and breathing signals are weak, and the noise also increases when the telemetry distance increases. This problem needs to be solved by digital signal processing methods, such as Adaptive correlation processing, wavelet transform methods, etc.

4. REFERENCES

[1]Lei Yuchao. Research and implementation of badminton technical feature statistics and pace training based on machine learning [D]. Central China Normal University, 2018.

[2] Wei Shuai, Yan Junxuan, Teng Lin. Research on Post-processing Algorithm of Inertial/Satellite Integrated Navigation Data [J]. 2022(11).

[3] Zhou Xiaoling, Wang Yimin, Cheng Hao, et al. Research on data processing algorithm of AC drive test system [J]. Control and Information Technology, 2018(5):5.

[4] Zhou Xiaoling, Wang Yimin, Cheng Hao, et al. Research on data processing algorithm of AC drive test system [J]. High Power Converter Technology, 2018(5).

[5] Wang Tianli, Zhou Chao. Research on improved algorithms for text data processing [J]. Fujian Computer, 2019, 35(8):2.

[6] Zhi Yuqin, Huang Yao, Fu Jia*, et al. Research on GPU parallelization acceleration algorithm in EAST motion Stark effect diagnostic data processing [J]. Nuclear Fusion and Plasma Physics, 2020, 40(1) :5.

[7] Chen Lin, Zhang Shuguang. The latest cases and prospects of foreign information technology-assisted training [C]// The 11th National Sports Science Conference Abstracts Collection. 2019.

[8] Chen Xin, Li Yongqi. A visualization data processing method and system for in-depth customized algorithm integration: CN112364084A[P]. 2021.

[9] Wang Yuying. Research on "Data Structure and Algorithm" experimental teaching mode reform based on Educoder platform [J]. Teacher, 2021(20):2.

[10] Zhang Lihua, Zhang Peixuan, Lin Ye, et al. A smart sports auxiliary training system and training method based on video analysis: CN111680608A[P]. 2020.

[11] Chen Jianxiong, Zou Lin. Design and implementation of the database of intelligent management platform for physical education teaching in colleges and universities [J]. Network Security Technology and Application, 2020(9):2.

[12] Zhao Lei. Research on sports training mode based on data mining technology [J]. Journal of Inner Mongolia Normal University: Natural Science Edition, 2022, 51(2):5.

[13] Qi Jiaojiao. Construction and simulation of multi-attribute training data mining model for athletes based on improved Apriori algorithm [J]. Microcomputer Application, 2018, 34(12):3.

[14] Zhao Xinghao, Wang Song, Hu Yanzhu. A Data Stream Classification Algorithm Based on AAE-DWMIL-LearnNSE:, CN110647671A[P]. 2020.

[15] Yu Fengyun. Research and implementation of intelligent decision support system based on data mining in sports training for middle school students [J]. 2022(15).

[16] Wang Tianli, Zhou Chao. Research on Improved Algorithm for Text Data Processing [J]. 2022(8).

[17] Yan Fang, Hu Pinghua, Zhao Ming, et al. Research on post-processing technology of aerial gravimetric data from platform gravimeter [J]. Navigation, Positioning and Timing, 2019, 6(3):10.

[18] Jia Xiaoyan, Wu Liji, Zhang Xiangmin, et al. Research on True Random Number Generator and Post-processing Algorithm for Smart Cards [J]. 2022(6).

[19] Sun Meilian, Zhan Cairong. Research and application analysis of data mining technology in sports training [J]. Contemporary Sports, 2021(35):0129-0129.

[20] Chen Zhenjie, Luo Yun, Huang He, et al. A data processing method and reasoning platform: CN110188884A[P]. 2019.

[21] Xie Congwei, Zhang Ye. Research on real-time data processing algorithm based on multi-measurement fusion [J]. Instrument Technology, 2018(2):4.

[22] Liu Hong. Research on a software and hardware algorithm for real-time data processing [J]. 2022(1).

[23] Xing Jing, Zhang Peixuan, Zhang Lihua, et al. A cloud platform-based machine vision algorithm training data management system and method: CN111709459A[P]. 2020.

[24] Zhu Tiebing, Bo Zhian. Research on intelligent analysis algorithm of medical data based on deep learning [J]. Electronic Design Engineering, 2021, 29(12):5.

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Optimal Game System Construction of Multilateral Trading System from the Perspective of Regulatory Economics Based on Cloud Data Calculation

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Abstract:By analyzing the atmospheric radiation characteristics of clouds in different bands, combined with the spectral characteristics of MODIS data, a multi-spectral integrated cloud detection method is proposed. This paper argues that from the macro level, economic development strategy, economic development level and economic scale are the main factors affecting developing countries' alliance; while from the industrial level, the game theory of dynamic analysis of the relationship between the subjects and the two-level negotiation-related Analysis of game theory. From the perspective of game theory, this paper analyzes the main contradictions in the current construction of the credit system of small and medium-sized enterprises, and analyzes the construction and innovation of the credit system of small and medium-sized enterprises in Yongzhou city.

Keywords: Data Visualization, College Smart Education System, Integrating Social Management Information

1. INTRODUCTION

Since the inception of the multilateral trading system (GATT/WTO), developing countries have participated in all rounds of negotiations from beginning to end. In terms of the form of participation in negotiations [1], the vast majority of developing countries have participated in various negotiating alliances. Externally, the government is faced with the general environment of how to obtain the understanding of other members through multilateral negotiations [2] and consultations within the framework of multilateral trade system negotiations, and obtain an international trade legal system that is beneficial to its own economic interests through bargaining [3]. The WTO is not a A development aid agency, but a member-driven organization, which means that the laws and resolutions formed within its framework are the product of compromise between developing and developed members, and are based on the commitments [4] undertaken by member governments and their representatives. A lot of analysis work.

There are also analysis of image data, empirical values from multiple trials, thresholds based on Bayes Factors, and so on [5]. This paper analyzes various contradictions and conflicts in the current construction of the credit system of small and medium-sized enterprises [6], and provides the improvement methods and countermeasures that can be used for reference for the construction and improvement of the credit system of regional small and medium-sized enterprises by analyzing the case of Yongzhou, Hunan [7]. The author always believes that, as an important methodology, the object of game theory research is how the interdependent rational subjects make decisions. It is the most appropriate [8], scientific and comprehensive way to use game theory as the institutional basis for the establishment and existence of GATT/WTO [9].

It can not only explain the institutional reasons established by GATT/WTO. The central idea of the threshold method is to select the best threshold according to the characteristics of image grayscale [10], brightness temperature, reflectivity or normalization index, and to compare the eigenvalues of image pixels with those of the image pixel one by one. The thresholds are compared [12], and finally the pixels are divided into corresponding categories according to the initially set thresholds. From different perspectives, the random service system has different classification forms [13]. According to the number of service desks, it can be divided into single service desk queuing system and multi-service desk queuing system [14]. From the time continuity of customer arrival and service, random service systems can be divided into discrete-time queuing systems and continuous-time queuing systems. Economic development strategy is the most important decision-making variable in a country's economic development [15]. According to the attitude towards trade development, it can usually be divided into export-oriented and import-substitution strategies [16].

In the game at the domestic level, interest groups continue to exert pressure on the government, forcing it to adopt its own preferred policies [17] and then profit for itself. Political leaders pursue their own power by establishing alliances between groups. Strengthen the government's negotiating ability and lay a good foundation for domestic enterprises to meet challenges and compete fairly [18]. This paper hopes to provide some thoughts on how to enhance the government's negotiation ability through the analysis of the game theory commonly used in economics to dynamically analyze the relationship between the subjects [19] and the two-layer game theory related to negotiation. However, the algorithm requires the input of data such as surface type, altitude [20], and distribution of ice and snow, and uses a large number of bands at the same time, which is easily affected by the working conditions of the sensor. behavior of interacting with each other [21].

For example, Player_A, he established a credit rating system according to the characteristics of his department, but in order to obtain the maximum benefit, that is, to get the maximum recognition [22] of the enterprise, he needs more information to enrich his rating basis. In other words, "game" Represents a combative decision-making problem, "It is similar in form to indoor gaming games or games such as chess, bridge, poker [23], strong hand, diplomacy or battleship, and it emphasizes the rational, cool, and computational nature of analysis This chapter first introduces the information of MODIS data; then

introduces the process of data reading and preprocessing [24]; and then analyzes the spectral characteristics of different objects in detail to lay the foundation for cloud detection. This means that if the spectrum in the system is free when the primary user's service request arrives [25], then joining the system will get a positive expected net benefit. Under the above assumptions, there will always be some primary user service requesting to join the system. Next, we consider the policy behavior of users in cognitive radio systems under different information situations.

2. THE PROPOSED METHODOLOGY

2.1 The Regulatory Economics Perspective

South Korea and ASEAN countries disagree with most developing countries in the negotiation on services issues. While most developing countries oppose the negotiation on services issues, South Korea and ASEAN support the US proposal. Secondly, in terms of extension, the game involves a wider range and more diverse modes than general negotiation. General negotiation has fewer requirements for the negotiating party, and only requires the negotiating party to have a correct assessment of its own purpose and the benefits it hopes to obtain through negotiation. Applying game theory to negotiation practice is to apply dynamic Issues of concepts and own and counterparty strategies are introduced into the analysis of negotiation. From Susan Strange (Susan Strange) on the development of the dynamic relationship between countries, including negotiation, has formed its unique system.

The data used in this paper is the 1B data of MODIS. After geometric correction, calibration calculation, etc., the data value of visible light and near-infrared band is reflectance, and the data value of thermal infrared band is brightness temperature value. At present, there is no enterprise credit system in my country. A national unified leading model has been formed, and different industry management departments have led the construction of different enterprise information management systems. At the same time, with the continuous economic development of East Asian countries and the continuous improvement of export structure, their status in the global production and processing chain is also rising, so the GATT complained by traditional developing countries does not include the concerns of developing countries. From the structure of negotiation, the negotiation process under the guidance of game strategy is more systematic and orderly.

General negotiation mainly studies how to organize and conduct negotiation from the perspective of individual negotiation, but lacks research and analysis on the impact of negotiation results on the entire socio-economic and political order. Visible light B1 is the preferred channel for cloud detection. If the reflectivity is greater than 30, it can be judged as a cloud.

2.2 The Multilateral Trading System

The brightness temperature difference between B29 and B31 is easy to detect high clouds, and B26 is easy to identify high cirrus clouds. This paper combines them to judge cirrus clouds. The specific manifestations are as follows: First, the legislation of credit reporting is seriously lagging behind, and the construction of enterprise credit system lacks legal protection. The game of different stakeholders has led to the delay in promulgating the "Regulations on Credit Information Management", and departmental regulations and some local regulations. From this point of view, "Nash equilibrium" only refers to the combination of the optimal strategies of all players, not the combination of strategies with the maximum utility of each player and the maximum total utility of all players (that is, the "Pare" best").

In fact, "Nash equilibrium" often represents the situation in which the combination of strategies that maximizes the utility of each player cannot be achieved. In the file MOD021KM.hdf with a resolution of 1 km, the numerical attributes in the three-dimensional attributes contain the slopes and intercepts of the compressed reflectance and radiance, as well as the units of reflectance and radiance, so according to these parameters, the formula (2 -1), (2-2), the reflectivity and radiance of each band can be obtained. In the case of no captain information, the main user does not know the captain information of the service request of the main user. By formula (2.2), a service request arriving at the main user joins the system with probability. Therefore the primary user service request joins the system at an effective arrival rate of .

They have such considerations. First, the impact of the liberalization of trade in services on the domestic economy is still unknown, and the liberalization of the service industry may promote the development of the domestic service industry; second, and more importantly, to take advantage of the opportunity to negotiate new issues Different from the general negotiation, the game is a systematic project, which not only pays attention to the strategic choices of both sides in the game and the mutual influence between the strategies, but also pays attention to the mutual influence between adjacent games. This is very evident in the negotiation of my country's return to the world. In the game at the domestic level, interest groups continue to put pressure on the government, forcing it to adopt its own preferred policies to make profits for itself; alliances between them to pursue their own power. In the game at the international level, a country's government always strives to maximize its own interests in order to cope with domestic pressure at any time, so as to minimize the adverse diplomatic consequences.

2.3 The Construction of the Optimal Game System of the Multilateral Trading System

Taking advantage of the characteristics of high cloud reflectivity of B26, low reflectivity of low clouds, and the difficulty of identifying cirrus clouds in visible light, the combination of B26 and B1 is used to further detect cirrus clouds; The reflectivity in these two channels is similar. With the goal of transforming the concept of corporate credit, we will increase publicity and training for small and medium-sized enterprises. Credit information publicity focuses on effectiveness and pertinence, and has carried out various forms of publicity and training for enterprises, which have achieved good results and basically reversed the inability of enterprises to provide credit information system construction in the past. Looking at the development history of the world trade system, since 1947 Since the establishment of the GATT system, numerous multilateral or bilateral trade agreements have been aimed at reducing or even completely eliminating the restrictions on international trade imposed by trade barriers of various countries, thereby achieving trade liberalization. Vegetation, water and sand can be separated from clouds and snow according to the characteristics of brightness and temperature, and then use T27 again to separate the snow and ice.

In this way, cloud detection based on a fixed threshold can be completed by combining the characteristics of water vapor, reflectivity and brightness temperature. In cognitive radio

systems, throughput and social benefit are two important concerns. The former reflects the efficiency of the system, while the latter reflects the total net benefit of all customers. From the perspective of system managers, they hope to maximize the efficiency of the system, while the goal of social managers is to maximize social benefits. Different from general developing countries in terms of economic and trade policies.

3. CONCLUSIONS

In this paper, the spectral characteristics of clouds in different bands are analyzed, and a cloud detection scheme based on the multi-spectral comprehensive threshold method is used to detect and process the MODIS data cloud. To consider the outcome of the problem from the equilibrium view of the game, and to improve the domestic legal mechanism, it requires the formation of a "share belief". The game equilibrium system view holds that the system is inherently generated by the strategic interaction of the participants. When the interaction of these strategies can produce balanced results, coordination and communication with relevant domestic decision-making departments.

4. REFERENCES

[1]Tang Yayun. From marriage and marriage to "two-headed marriage": Game analysis of the evolution of Chinese marriage patterns [J]. Cultural and Educational Materials, 2022(3):4.

[2] Guo Yang, Wu Feng, Xu Qingqiang, et al. Optimal capacity allocation strategy of wind-solar-storage system under different operation modes and economic analysis considering network loss subsidies [J]. Smart Power, 2019.

[3] Li Ping, Nie Zhengying, Wang Haisong. The Optimal Path Selection of Agricultural Products Agreement Circulation——Based on the Perspective of Green Supply Chain [J]. Business Economics Research, 2019(14):4.

[4] Lian Xiaolin, Li Xiaolu, Cao Yang, et al. Multi-microgrid coordination optimization scheduling considering multi-agent master-slave game [J]. 2021.

[5] Tan Guanfu. Internet Regulation under the Multilateral Trading System [J]. Modern Management Science, 2019(2):3.

[6] Cao Wujun, Zhou Maling, Xue Chaogai. Research on the Influence Mechanism of Government Regulation on the Development of Cross-border E-commerce Industry: Based on Evolutionary Game Theory and System Dynamics [J]. Business Economics Research, 2020(1):4 .

[7] Wang Yu. Research on the optimal mechanism design of global tourism marketing based on Stackelberg game [D]. Chongqing University, 2018.

[8] Feng Junzong, He Guangcheng, Daihang, et al. "Source-load" low-carbon economic dispatch based on cooperative game under the "two-carbon" goal [J]. Electrical Measurement and Instrumentation, 2022, 59(4):8 .

[9] Nie Shuai, Cai Guotian, Gao Liping. 3E evaluation method of park energy system based on game theory-cloud model [J]. Progress in New Energy, 2022, 10(2):9.

[10] Chen Xi, Wang Lu. The U.S. Biden Administration's Foreign Aid Policy Turn and Response: An Empirical Study Based on Historical Data [J]. International Economic Cooperation, 2022(2):16.

[11] Ma Li, Kang Yongzheng, Liao Qiyun. Organizational behavior choice of new generation employees from the perspective of psychological contract: A systematic analysis based on evolutionary game model [J]. Journal of Systems Science, 2021, 29(3):7.

[12] Bao Yurong, Ying Liping, Tang Sisi, et al. The relationship between medical care and medical insurance system and optimization suggestions from the perspective of system theory, game theory and synergy theory [J]. Chinese Journal of Hospital Management, 2021, 37(8): 4.

[13] Wang Ying, Li Dengfeng. Equilibrium Analysis of Climate Change Game [J]. Systems Engineering Theory and Practice, 2021, 41(12):3178-3198.

[14] Dong Yuhan, Cong Haibin, Zou Deling. Research on the main behavior of sustainable development of characteristic towns based on tripartite game [J]. Science and Technology and Management, 2021, 23(6):10.

[15] Li Zhaoqing. Fractal and Chaos Control of a Class of Economic Competitive Systems [D]. Shandong University, 2019.

[16] Qu Xinchi, Hou Guisheng, Sun Xiangyan. Evolutionary Game Analysis of Enterprise Green Innovation Ecosystem under Government Regulation——Based on the Perspective of Differentiation of Initial Will [J]. Systems Engineering, 2019, 37(6):12.

[17] Wang Yue, Chen Hongzhuan. Optimal pricing decision-making game and chaos analysis for the main manufacturer-supplier collaboration [J]. Journal of Dynamics and Control, 2018, 16(5):7.

[18] Lin Yaning. Research on Pareto Optimality in Cooperative Games [D]. Shandong University of Science and Technology, 2018.

[19] Raymond. WTO members discuss the development direction of the multilateral trading system [J]. WTO Economic Tribune, 2018, No.172(02):61.

[20] Chai Xiaolin. In-depth participation in the multilateral trading system to promote the construction of an open economic system [J]. China Economic and Trade, 2013(7):2.

[21] Li Yang. The Game Mechanism of the Multilateral Trading System [J]. International Economic and Trade Exploration, 2008, 24(5):5.

[22] Chen Taifeng. Game Theory of the World Trade System [D]. University of International Business and Economics.

[23] Liu Guangxi. Win-win Game Theory [D]. Fudan University, 2007.

[24] Fan Yongming, He Ping. China is an active builder of the multilateral trading system [J]. Fudan Journal (Social Science Edition), 2006(6):25-35.

[25] Wang Can. The game between regional economic integration and multilateral trading system [J]. Legal System and Society: Xun Journal, 2009.

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Online Analysis Algorithm of Hainan Characteristic Tourism Industry Structure Analysis Platform Based on Real-Time Acquisition Cloud Network System

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Abstract:This paper proposes an anomaly detection model based on deep belief network ensemble learning. The model solves the problem of unbalanced positive and negative samples of multi-source operation and maintenance data, and at the same time uses the good feature extraction function of the deep belief network. Under the Markov assumption, the least squares method is used to establish a mathematical model to obtain the 2019-2027 year of Sanya City. The orderly degree of tourism industry structure. The numerical experiment results show that the order degree of Sanya's tourism industry structure is increasing year by year. However, economic fluctuations are not a significant factor affecting the evolution of the industrial structure, and there is no obvious mutual feedback relationship between the two. It is proposed to build a characteristic industrial structure system that adapts to the construction of an international tourism island.

Keywords: Online Analysis Algorithm, Hainan Characteristic Tourism, Tourism Industry Structure, Real-Time Acquisition Cloud

1. INTRODUCTION

CCD (Charge Coupled Device) image sensor is a high-performance solid-state imaging device, which converts optical signals into electrical signals [1], and is widely used in image acquisition systems and measurement and detection systems. It has the advantages of wide spectral response, good linearity, wide dynamic range, low noise [2], high sensitivity and real-time transmission. The data acquisition system composed of a single-board microcomputer completes the detection and processing of the five main powers of the rectifier, and indirectly calculates a parameter [3], prints, records, and displays the average value of each important data in real time user [4].

With the rapid development of information technology, the data acquisition system is gradually developing towards the trend of high speed [5], long distance and networking. The traditional data acquisition system using a special acquisition card has been difficult to meet the needs of the acquisition site. The emergence of industrial Ethernet has greatly promoted the development of data acquisition technology [6]. At present, there are many methods to study the structure of tourism industry. Su Linning et al. used grey system theory to study the correlation degree of tourism industry structure. The grey relational analysis method is the most common method to study the structure of tourism industry [7], and there are many related literatures. Yang Xinjun et al. used the deviation-share analysis method (SSM) to evaluate the advantages and disadvantages of the regional tourism industry structure and the strength of its own competitiveness [8].

Modern economic growth is essentially based on the industrial structure [9]. Practice has proved that the adjustment of industrial structure is closely related to economic growth. Economic growth will inevitably lead to the adjustment of economic structure [10]. The adjustment of economic structure requires the matching industrial structure. Structural adjustment presents a spiral relationship of "growth-adjustment-growth". With the continuous improvement of my country's economic situation, residents' income has grown steadily [11], and the demand for rural tourism products and services with leisure as the main purpose is also increasing. Regions rich in tourism resources have keenly captured this information. Taking Hainan Province as an example, Hainan proposed to develop rural tourism and leisure agriculture as early as 2010 [12], and proposed to build 100 demonstration sites for leisure agriculture and 100 sightseeing orchards. From the perspective of cloud computing, cloud computing realizes resource [13] follow-up and business on-demand through software-defined methods. In short, the development of cloud computing services requires the support of strong network capabilities [14], and the optimization of network resources also needs to learn from the concept of cloud computing. Therefore, cloud-network integration is an inevitable trend in the development of cloud computing technology [15].

In order to acquire color images with area array CCD, the following two methods can be adopted [16]. (1) Let the light split into three colors, red, green, and blue through a special prism, and then use three CCDs to receive one of the colors and convert them into electrical signals [17]. The EtherCAT Ethernet bus technology is currently a relatively advanced industrial Fieldbus technology can not only meet the requirements of high speed [18], large amount of information and real-time in industrial control, but also has the characteristics of simplicity, flexibility and openness, and has been widely used in the industrial control industry [19]. The tourism industry is a very important part of the whole national economy industry, and the research methods applicable to the industrial structure [20] of the national economy are also applicable to the study of the tourism industry structure to a certain extent. Some of the above-mentioned research methods also fully reflect this point [21].

Kuznets and Chenery and others believe that the growth of the total economic volume depends on the transformation of the structure [22]. Under certain conditions, the higher the transformation rate of the industrial structure, the faster the growth of the total economic volume [23]. In 2016, Hainan

Province proposed to carry out the "Beautiful Hainan 100 Towns and 1000 Villages" project, attaching great importance to the transformation and upgrading of the rural tourism industry. Multi-source data collection based on OpenStack and OpenDaylight [24] cloud-network integration environment mainly faces challenges such as wide monitoring level, multiple data sources, and dynamic scalability of cloud computing. The main challenge for the comprehensive analysis of the collected data is to analyze the correlation rules between the time series collected data through algorithms.

2. THE PROPOSED METHODOLOGY

2.1 The Real-Time Collection Cloud Network System

On January 2, 2018, the "Opinions of the State Council on Implementing the Rural Revitalization Strategy" officially Released, the revitalization of the rural economy has been officially elevated to the level of the national strategy. Hainan Province has formulated detailed rules for the development of the rural economy based on its own actual conditions.

Choosing a good color interpolation method is very important to obtain high-quality images. The more complex the selection method, the higher the quality of the image produced by the interpolation, but the data processing time required is very long, and it is difficult to implement complex algorithms with hardware. The user can press the "minute average key" on the instrument at any time to obtain the printed result of the current minute average value of this power. The four-digit digital tube on the panel exchanges and displays the current average value of the voltage and current output by the rectifier at minute intervals. The system is mainly composed of a PC master station, multiple EtherCAT slave stations, multiple sensors and communication medium. As shown in Figure 1, the acquisition process is as follows: the master station device sends an EtherCAT downlink message to each slave station, when the message passes through each slave station. OpenStack provides an Infrastructure as a Service (IaaS) solution through a variety of complementary component services, each of which provides an API for integration.

It virtualizes a large machine into many small machines so that the large ones are divided into small ones for use, which greatly improves the resource utilization rate. Service providers need to monitor the various virtual resources provided by the cloud platform to users in real time to ensure the reliability and stability of services. In order to reduce the interpolation operation time and facilitate hardware implementation, the bilinear mean algorithm is the optimal choice, but this algorithm will cause blurred edges. In this paper, an improved bilinear interpolation algorithm is used, which takes the correlation into account when interpolating the R and B signals. The slave station parses the EtherCAT message.

2.2 The Hainan Characteristic Tourism Industry Structure Analysis Platform

If the message is addressed to the slave station, it will read the corresponding data or write the data to the location specified by the message, and at the same time, the work counter will increase by 1, indicating that the message has been sent from the slave station. station processing. When the last slave has processed the message, the message starts to return.

The optimization research of tourism industry structure often needs quantitative analysis, and high-quality tourism statistical data is the basis to ensure accurate quantitative research. Restricted by my country's current tourism statistics system and tourism statistics management level, it is almost impossible to directly obtain relevant data. The rural tourism industry is formed with rural resources as the core. Most of the service personnel absorb the surplus labor force of the local villages, resulting in the low cultural level and low overall quality of the employees, and many rural bad habits are brought into the tourism service. Therefore, It is necessary to introduce a new concept of relevant quantification-order degree on the basis of the existing tourism statistics. Since Hainan was established as a province, the industrial structure has been continuously adjusted. In order to reveal the quantitative relationship between some relevant data, find out Its inherent laws often require data fitting work. The basic and important data fitting method is the least squares method.

Least squares is an optimization method that finds the best functional match for the data by minimizing the sum of squares of errors.

2.3 The Research on Online Analysis Algorithm of Hainan Characteristic Tourism Industry Structure Analysis Platform

Tourism refers to a comprehensive service industry that uses tourism resources and tourism facilities to provide tourists with transportation, tours, accommodation, meals, shopping, entertainment and other links. The employment structure mode of the three industries in Hainan Province is one, three, two, and the mode of labor transfer is the mode of retreating one and entering three. Practitioners are mainly in the primary industry. In a broad sense, tourism shopping refers to all the behaviors of tourists, such as visits, tours, entertainment, etc.

According to common sense, the development and transfer cycle of various industries in the tourism industry is long, and the state of the tourism industry structure is considered to be only related to the current state, not the previous state. The traditional marketing methods of Hainan rural tourism enterprises are inefficient. And the effect is not good. With the help of the smart tourism platform, it is possible to deeply mine the information data of tourists in the travel itinerary. First, according to the EasyEnsemble sampling idea, random sampling is performed from the majority class of the dataset to generate multiple majority class subsets, which are combined with the minority class respectively. for multiple sub-training sets. Then each sub-training set is separately input into the deep belief network for feature extraction. So as to locate the target market and implement precise marketing.

That is to say, the change process of the tourism industry structure has no aftereffect, so it satisfies the conditions of the Markov hypothesis, which can be used to quantitatively analyze it. and all other interrupts are masked. When returning to the Windows context, the non-INtime interrupt will be unmasked so that it can be handled normally by Windows. Based on the consumption level of the tourist group fed back by the smart tourism service system, the Open-Falcon component Agent is installed on each virtual machine. In addition, vm1 installs the corresponding server components, including the Transfer component, the Graph component, the API component, and the Dashboard component. and Hbs components. Finally, make the necessary configuration and start the corresponding components. Consumer characteristics, consumer preferences and other information, subdivide the tourist market, position your own products

according to the needs of tourists, and communicate in a timely manner, which can effectively improve benefits.

3. CONCLUSIONS

Study the fusion technology of OpenStack and OpenDaylight, and based on the detailed understanding of the cloud-network fusion organizational structure, abstract the data collection requirements in this environment, and compare the advantages and disadvantages of the existing data collection tools. A mathematical model of least squares method was established to study the order degree of tourism industry structure in Sanya. The research results show that the optimization of the tourism industry structure is a systematic project, and it is extremely important to promote the optimization of the system in order to make the tourism industry structure of Sanya develop healthily, orderly and rapidly.

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5. REFERENCES

[1]Fang Shimin, Chen Jie. Research on Hainan Tourism Industry Structure Optimization Based on Shift-Share Analysis [J]. 2021(2013-4):94-98.

[2] Huang Mingming. Research on the development of sports, culture and tourism industry in Wenchang, Hainan [D]. Hainan Institute of Tropical Oceanography, 2019.

[3] Xu Wenjuan, Wan Qian. Based on Systematic Analysis of Documents——Research on the Sustainable Development of Ecotourism in Hainan [J]. Education and Teaching Forum, 2020(38):2.

[4] Chen Zheng. Research on Hainan Eco-cultural Tourism Development [D]. Hainan Institute of Tropical Oceanography, 2019.

[5] Lin Yue, Hong Xiuling, Wang Zhehe. Research on the structural order degree of tourism industry in Sanya City based on the least square method [J]. Journal of Qiongzhou University, 2019.

[6] Liu Guohai. Analysis of the impact of "replacement of business tax with value-added tax" on Hainan's tourism under the background of supply-side reform [J]. Economic Forum, 2018(9):5.

[7] Li Wencai. Analysis of the impact of tourism policies and regulations in Hainan Province on the tourism pattern and economy [J]. Tourism Overview (Second Half Month), 2020, No.317(04):63-64+67.

[8] Xie Bianxiu. Analysis of the Agricultural Industry Structure of Hainan Province Based on Grey Theory [J]. Tropical Agricultural Engineering, 2021, 45(4):4.

[9] Lin Yue, Hong Xiuling, Wang Zhehe. A study on the order degree of tourism industry structure in Sanya based on the least square method [J]. Journal of Hainan Institute of Tropical Oceanography, 2019, 26(5):5.

[10] Lv Xiaojing, Xu Jing. The Impact of Hainan Consumer Price Index on Domestic Tourism Revenue——Based on Exploratory Data Analysis [J]. Business Research, 2018, 000(011):62-63.

[11] Zhao Shiyuan. Research on the optimization path of Hainan's rural tourism industry structure from the perspective of smart tourism [J]. Economist, 2018(9):2.

[12] Sun Dechao. Research on the development strategy and implementation path of high-end leisure sports in Hainan Free Trade Experimental Zone (Hong Kong) [C]// The 11th National Sports Science Conference Abstracts Collection. 2019.

[13] Kong Chaoli. Analysis of Influencing Factors of Hainan Tourism Based on Principal Component Regression [J]. 2019.

[14] Fan Jiashuo, Wang Qingsheng. Research on the influence of Hainan tourism online word of mouth on tourists' destination decision [J]. Sustainable Development, 2022, 12(2):10.

[15] Wang Pengfei, Li Hongbo. Research on the Mechanism of Regional Economic Resilience Based on the Perspective of Industrial Structure Correlation——Taking Jiangsu Province as an Example [J]. Advances in Geography, 2022, 41(2):15.

[16] Zhao Xinwei. Analysis of Influencing Factors of Rural Tourism Consumption Willingness in Hainan [D]. Hainan University, 2018.

[17] Zhang Meng. Changes and Influencing Factors of Spatial Network Structure of Tourism Economy——An Analysis of Hainan Free Trade Zone [J]. Business Economy, 2021(7):2.

[18] Lv Xiaojing, Xu Jing. The impact of Hainan's consumer price index on domestic tourism revenue: Based on exploratory data analysis methods [J]. Business Economics, 2018(11).

[19] Chen Song, Hui Qing, Wang Jizhong, et al. Analysis of ways to improve the performance of tourism industry in Hainan Province [J]. China Economic and Trade Tribune, 2018(32):2.

[20] Cai Shu. Research on the development of "Internet + rural tourism" in Hainan under the rural revitalization strategy [J]. Industrial Innovation Research, 2020(18):3.

[21] Cai Qinnan, Cai Lunhong. Research on the optimization of agricultural industrial structure in Hainan Province based on grey relational analysis [J]. Modern Agricultural Science and Technology, 2021(18):6.

[22] Yan Fangfang. Research on the Influencing Factors of Hainan Tourism Service Trade Competitiveness [D]. 2019.

[23] Chen Fangxin, Chen Xiulian. Analysis on the intelligent development of Hainan's rural tourism industry [J]. Vacation Tourism, 2019(4):3.

[24] Li Can, Jin Dan, Wang Jiao. An Empirical Study on the Changes of Industrial Structure Due to Consumption Upgrade of Hainan Residents——Analysis Based on VAR Model [J]. National Circulation Economy, 2021(10):7.

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Exploring the Application of Automation Technology in Mechanical Design and Manufacturing: from the Perspective of 6G

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Abstract:Automation technology has created opportunities for mechanical design and manufacturing, laying the foundation for industry improvement. Its application has refined and made the process intelligent, boosting efficiency. With 5G technology, there are limitations, but 6G aims to achieve ubiquitous wireless intelligence, integrating machine learning for user intent acquisition and decision making. Its performance will improve with a 1Tbps peak rate, <50 microseconds latency, 1 million connections/km, 1Gbps/m² throughput density, and 100x and 10x increase in calculation and spectral efficiency. In the future, the B5G/6G network requires AI-supported management and control for self-awareness, self-configuration, self-optimization, and self-repair. In campus security, effective control is critical for safety. To enhance the machinery manufacturing industry's long-term development, automation technology must be improved and applied effectively.

Keywords: Automation Technology, Mechanical Design, Manufacturing, 6G

1. INTRODUCTION

Through the for each evaluation index, different schools have different values. In this paper, the optimal value is used as the standard data for reference, effectively save the labor costs of production enterprises, and save production costs for In this way, a standard data sequence is formed and recorded as the formula is: of automation technology and equipment is relatively large, It will bring expected benefits in the process of use, and apply automation technology with a developmental perspective, improve production quality and save production costs indicating that the use of grey relational degree to In the face of the development background of globalization and marketization, improve the fuzzy comprehensive evaluation method avoids. Therefore, only by comprehensively improving the production quality and production efficiency of products can they occupy a place in the fiercely competitive market [1-6].

The application of automation the disadvantages of using the principle of maximum membership. improve the efficiency of mechanical design and manufacturing, achieve the purpose of mass production of products, and ultimately achieve the goal of maximizing corporate interests. The accuracy of automation technology can further ensure the quality of product production. Through Henan Provincial private undergraduate colleges and universities aim to cultivate applied talents, and strive to run higher education as their own responsibility. it can fully reduce the participation of manpower and material resources, effectively save the labor costs of production enterprises, and save production costs for mechanical design and manufacturing. Although the initial investment of automation technology and equipment is relatively large, It will bring expected benefits in the process of use, and apply automation technology with a developmental perspective, improve production quality and save production costs through the application of automation technology. Judging from the current situation, my country's mechanical design and manufacturing industry has achieved rapid development and achieved remarkable achievements. In this process, automation technology has played an irreplaceable role. The use of automation technology to achieve mechanical automation production has been widely used in many developed countries. With the continuous increase of labor costs in my country, the promotion of the use of mechanical automation technology has become an inevitable trend in the future, and it can also make my country's Machine-made products can have more advantages in international competition [7-14].

Automation technology has become more and more mature. Many domestic machinery design and manufacturing companies have also realized the significance of automation technology to the machinery manufacturing reform process. They have vigorously introduced automation technology to

control labor costs at a very low level, and at the same time allow the product qualification rate to be obtained. The promotion has also improved the comprehensive competitiveness of the enterprise. Domestic machinery automation technology has become a mainstream trend, which will cause a new generation of technological changes in the machinery design and manufacturing industry, and lay a solid foundation for China's machinery manufacturing to go abroad and to the world. Automation technology plays a crucial role in enhancing the efficiency of mechanical design and manufacturing processes. The use of automation technology leads to a refined and intelligent manufacturing process, which greatly improves production efficiency. In addition, automation technology is also supported by various applications such as enhanced mobile broadband, ultra-reliable low-latency communication, and large-scale machine communication. The application of automation technology makes the process of mechanical design and manufacturing refined and intelligent, and significantly improves production efficiency [15-21].

Automation technology has changed the production method of the machinery manufacturing industry from traditional manual production to automated production, greatly reducing production errors, improving the accuracy of machinery manufacturing, and reducing the workload of workers. Computer control is more stable and reliable than human control, and can reduce the occurrence of accidents. In terms of industrial organization and production scale, the gap between my country and developed countries is too large. The main reason is that my country's lack of understanding and maturity of automation technology has a huge gap with foreign developed countries. There is a serious lack of scientific management mechanism in talent management. Most of my country's mechanical processing managers are theoretical talents, who have solid theoretical knowledge and neglect the evaluation of practical operations [22-24].

2. THE PROPOSED METHODOLOGY

2.1 The Automation Technology

In the design and manufacture of modern machinery, the requirements for integration are getting higher and higher. For this trend of integrated applications, people need to further analyze the application of integrated development and classroom teaching is the driving force for realizing reform, can promote mechanical design and The realization of manufacturing integration, innovation and development. reflects the effect of integration. Through automation technology, the integration effect can be simplified, especially when it comes to information processing or software applications. Effectively improve the effectiveness of information data processing, and can comprehensively guarantee the quality of However, the 5G network's elastic resource configuration is insufficient to meet the future demands for ultra-high bandwidth, ultra-dense connections, and ultra-low latency, making it challenging to achieve all three application scenarios simultaneously. This evaluation method can be used in the evaluation of public physical education in colleges and universities.

Judging from the current situation, the application of automation technology in the mechanical design and manufacturing process is becoming more and more extensive, and the application effects obtained are becoming more and more obvious. However, the disadvantage of this evaluation method is that the calculation process is complicated and time-consuming. The height also points out the direction for optimizing mechanical design and manufacturing. Only by fully embodying the advantages of Therefore, the use of computer programming to program the evaluation process is the follow-up work of this research. The application of mechanical automation in mechanical design and manufacturing should effectively combine the actual needs of enterprise production and technological development, and according to the needs of specific products, use corresponding automated production methods during production. At present, The purpose of evaluation is to improve and improve, and to clarify the purpose of evaluation of teaching quality is crucial in my country's mechanical design and manufacturing is the development direction of integration, flexibility, virtualization and intelligence. The integration of advanced technology in to the improvement of teachers' classroom teaching quality. However, there are deviations in the actual teaching quality evaluation process. The gradual development of science and technology has promoted the application of high-tech in mechanical design and manufacturing to a wider range.

2.2 The 6G

Through this study, 65% of teachers believe that the purpose of teaching evaluation is to provide a reference for school leaders to evaluate teachers, and it is linked to teachers' evaluation and treatment, ignoring the real purpose of evaluation. To address these limitations, the development of 6G technology has become a priority. With a vision to achieve ubiquitous wireless intelligence, 6G will leverage artificial intelligence (AI), emerging materials, and integrated antenna-related technologies to build a new world. Its definition includes mobile ultra-wideband, super Internet of Things, and AI, with machine learning technology being a promising candidate for AI.

The goal is to achieve the deep integration and application of the quaternary space of human, machine, matter, and spirit (Genie), enabling efficient user intent acquisition and decision-making. Compared to 5G, 6G aims to significantly improve performance, including 1Tbps peak rate, 1Gbps user experience rate, latency less than 50 microseconds, 1 million connections per kilometer, 1Gbps throughput density per m2, and 100x and 10x increases in calculation and spectral efficiency, respectively. In the future, the B5G/6G edge network will require a new AI-supported management and control paradigm to handle the diverse service requirements and explosive growth of connected devices.

In the forthcoming B5G/6G edge network, the exponential growth in the number of connected devices and the diverse service requirements necessitates a new artificial intelligence-based management and control paradigm. This paradigm should be capable of managing highly heterogeneous infrastructure, wireless access, and computing and storage resources to achieve the network's self-awareness, self-configuration, self-optimization, and self-repair. To enable intelligent management and control of the network, the B5G/6G system should automatically detect customer intentions and leverage communication, computing, and storage resources across the network to intelligently decompose and offload tasks, ultimately providing on-demand services. Intent, which refers to the system's state, is a declarative way of describing the requirements for a particular service.

2.3 The Application of Automation Technology in Mechanical Design and Manufacturing

At present, the mechanical design and manufacturing industry is gradually developing in the direction of intelligence, and intelligence The safety of college campuses has always been a restrictive factor for the development of higher education in my country, mainly refers to giving mechanical equipment the ability to analyze and think, further reduce the work pressure of the staff, and improve the manufacturing effect of mechanical equipment. Through automation technology, some high-end technologies and equipment can be used to rationally apply processing software and enhance the application value of mechanical equipment. In the field and it is also a key factor that poses danger to the lives and properties of teachers and students.

The artificial intelligence automation machinery manufacturing technology is very systematic and comprehensive, which saves a lot of manpower costs for machinery manufacturing enterprises, and the machinery and equipment produced by it are of higher quality and shorter time. Take the current artificial intelligence robotic arm used by machinery manufacturing companies as an example. In machinery manufacturing companies, the number of robotic arms replacing labor is gradually increasing. As the first artificial intelligence robots that appeared in modern industry, robotic arms have a great impact on machinery manufacturing companies. Impact. The robotic arm can accept instructions and accurately locate a point in the three-dimensional space for mechanical manufacturing. The robotic arm has a greater carrying capacity than a human arm. The rigidity of the robotic arm can improve the stability, movement speed and positioning of the mechanical design and manufacturing. Accuracy. Mechanical design and manufacturing have a certain adaptability, which can help them to occupy a place in the fierce market environment, use the constantly updated technology to use market demand, and constantly adjust the structure and types of mechanical products.

The application of flexible automation systems in mechanical design and manufacturing can continuously optimize the man-machine interface, prompting enterprises to establish and improve information systems, and realize the goals of flexible management of enterprises through computer systems. Manual intervention is allowed in the process of improving the information system, because it is highly adaptable to the environment.

3. CONCLUSIONS

This article discusses the importance of effective campus security control in colleges and universities and the significant role of 6G technology in mechanical design and manufacturing. The advancement of automation technology is crucial for the long-term development of China's machinery manufacturing industry. Thus, improving automation technology and enhancing its application is vital.

4. REFERENCES

[1]Lin Chang, Cai Fuqing, Yu Xiude. Research on the Application of Automation Technology in Mechanical Design and Manufacturing[J]. Science and Technology Wind, 2018, No.345(13):151-151.

[2] Shi Fang, Tao Zengjie. Research on the Application of Computer Technology in Mechanical Design, Manufacturing and Automation[J]. Information Recording Materials, 2018, v.19(06):109-110.

[3] Dong Xiao. Discuss the application value of automation technology in mechanical design and manufacturing [J]. Internal Combustion Engines and Parts, 2018, 000(001): 72-73.

[4] Li An, Chen Huanrong. Application research of automation technology in mechanical design and manufacturing[J]. Electronic Test, 2018, 000(010):115-116.

[5] Yuan Junfeng. Exploring the application of automation technology in mechanical design and manufacturing[J]. Agricultural Technology and Equipment, 2020(7).

[6] Zhang Zhiwu. Research on the Application of Automation Technology in Mechanical Design and Manufacturing[J]. Information Recording Materials, 2019, 020(010):118-119.

[7] Lu Zhipeng. Application of Automation Technology in Mechanical Design and Manufacturing[J]. New Business Weekly, 2020, 000(002):201.

[8] Cheng Jie. Research on the Application of Automation Technology in Mechanical Design and Manufacturing[J]. Urban Construction, 2019, 000(011):199.

[9] Wang Yunping, Zhan Hongkun. Application research of automation technology in mechanical design and manufacturing[J]. Digital User, 2019, 025(022):161.

[10] Xiaonan Wang. Application of automation technology in mechanical design and manufacturing[J]. Engineering Construction, 2020, 3(5).

[11] Huang Jinyuan. Research on the Application Strategy of Automation Technology in Mechanical Design and Manufacturing[J]. Southern Agricultural Machinery, 2019, v.50; No.324(08):167-167.

[12] Li Xin. Application of Automation Technology in Mechanical Design and Manufacturing[J]. Electronic Technology and Software Engineering, 2018.

[13] Yu Shoupeng. Discussion on the application of automation technology in mechanical design and manufacturing[J]. 2021(2016-1):38-38.

[14] Xuan Defeng. Application analysis of automation technology in mechanical design and manufacturing[J]. East China Science and Technology: Academic Edition, 2018, 000(001): P.288-288.

[15] Li Xin. Application of Automation Technology in Mechanical Design and Manufacturing[J]. Electronic Technology and Software Engineering, 2018, 000(009): P.126-126.

[16] Zheng Jinbo, Liu Yong. Research on the Application Strategy of Automation Technology in Mechanical Design and Manufacturing[J]. Electronic Paradise, 2019(8):0236-0236.

[17] Yao Wei. Exploring the application of automation technology in the field of mechanical design and manufacturing [J]. Journal of the School of Electronic Engineering, 2020, 009(003): P.159-159.

[18] Yu Tianxu. Research on the Application of Automation Technology in Mechanical Design and Manufacturing[J]. Science and Technology Wind, 2020, 000(003):168.

[19] Zhang Zhiwu. Research on the Application of Automation Technology in Mechanical Design and Manufacturing[J]. Information Recording Materials, 2019(10).

[20] Yu Song. Application of Automation Technology in Mechanical Design and Manufacturing[J]. Science Popular, 2020(1): 121-121.

[21] Chen Heng. Research on the Application of Automation Technology in Mechanical Design and Manufacturing[J]. Southern Agricultural Machinery, 2019, 050(021):108.

[22] Zhong Jiaxi. Research on the Application of Automation Technology in Mechanical Design and Manufacturing[J]. Easy to Learn Computer, 2019, 000(031): P.1-2.

[23] Yang Liu. Application of automation technology in mechanical design and manufacturing[J]. South Agricultural Machinery, 2020, v.51; No.345(05):131-131.

[24] Mao Ze, Zhang Jiexin, Li Tianjiao. Application of Automation Technology in Mechanical Design and Manufacturing[J]. Fenghui, 2020, 000(002): P.225-226.

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Reflections on the Construction Path of Integrating Red Culture into the Integration of Large Medium and Small Ideological and Political Courses

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Abstract: The integration of red culture into the integrated construction of ideological and political courses in universities, middle schools and primary schools is an urgent need to accelerate the connotative development of ideological and political courses. It is an inherent requirement to deeply explore the value of the red culture era, and it is also necessary to promote the implementation of the fundamental task of cultivating people of the policy. The integration of red culture into the integrated construction of ideological and political courses in primary, middle and primary schools should follow the principles of overall planning, spiral rise, combination of explicit and implicit, and adapt measures to local conditions, tap the value of local red cultural resources, and make them deeply integrated into the integrated construction of ideological and political theory courses in primary, secondary, and primary schools, requires innovative methods and methods, which can be constructed from four aspects: integrating local red cultural resources, compiling local red cultural teaching materials, enriching students' social practice forms, and making good use of network multimedia platforms.

Keywords: Red culture, construction path, ideological and political courses

1. INTRODUCTION

Promoting the integration of ideological and political theory courses in large, medium, and small schools is the direction of the education reform of the party and the country. General Secretary Xi Jinping emphasized at the symposium for teachers of ideological and political theory courses: "It is very necessary to set up ideological and political theory courses in universities, middle schools and primary schools in a gradual and spiral manner." In order to thoroughly implement the spirit of the speech, in December 2020, the office of the ministry of education the office established a steering committee for the integrated construction of ideological and political courses in universities, middle schools and primary schools, and issued the "implementation plan for the reform and innovation of ideological and political theory courses in schools in the new era", detailing six aspects from the basic requirements, curriculum objectives, curriculum system, course content, teaching material system, and organizational leadership. Deploy the integrated construction of ideological and political courses in universities, middle schools, and primary schools, so as to provide top-level design and path guidance for the practice of schools at all levels.

The material form of red culture mainly refers to the material products with physical value created by the Communist Party of China during the Revolutionary War, such as revolutionary sites, documents, and revolutionary cultural relics. These things not only reflect the hard struggle history of the Chinese nation, but also carry the excellent national spiritual culture of the Chinese nation. The material form is the main form of expression of the red culture, and the material form of the red culture has been growing and evolving with the development of the social material cultural form. When the material form of the red culture grows to a certain extent, it will condense into the form of spiritual civilization content. General Secretary Xi Jinping pointed out that "it is an important project to coordinate and promote the integration of ideological and political courses in universities, middle schools and primary schools, and promote the connotative development of ideological and political courses" .

The integrated construction of ideological and political courses is an innovative process that emphasizes "breaking the barriers of academic stages". It is proposed to solve the problems that the teaching objectives of each academic stage are independent of each other, the teaching process is separated, and the teaching effect is not obvious. Looking at the integrated construction of ideological and political courses, the most difficult point lies in how to realize the effective connection between different stages of study and improve the overall teaching effect of ideological and political courses. Jiangxi compiles local red culture textbooks covering different stages of schooling, digging into the value of red cultural resources in old revolutionary areas.

In terms of integration methods, clarify the curriculum construction standards, gradually and spirally promote the introduction of red culture into classrooms and minds, build an integrated construction pattern of ideological and political courses for colleges, middle schools, children, and children, and encourage young students to strengthen their ideals and beliefs, inherit the red gene, and become a red country. successor.

The development of red culture has witnessed the great course of the Chinese revolution. The good spirit of the revolutionary martyrs who are not afraid of sacrifice and unremitting struggle for the rejuvenation of the nation is a precious educational resource. Reasonable introduction of it into the ideological and political classroom can form a subtle influence on the students. In the new era, exchanges between countries are becoming more and more frequent, and multicultural trends of thought continue to emerge, which has had a great impact on college students. There are many advanced hero models in the red culture of the Heihe area, such as Ma Zhanshan, Yang Jingyu, Zhao Zhishang, etc. They are all good resources for the development of ideological and political courses.

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2. THE PROPOSED METHODOLOGY

2.1 The significance of integrating red culture into the integrated construction of ideological and political courses in universities and middle schools and small schools

Red culture transcends the boundaries of time and space and always keeps pace with the development of society. We are currently in a critical period when the sons and daughters of China are striving to realize the Chinese dream. As a red culture carrying advanced genes, it has a strong leading role in practice, which also prompts it to continue to stimulate its due vitality in the new era value. The key to realizing the value of red culture is to use it to educate, infect, edify and inspire people, and finally transform the potential spiritual power into a powerful material force dedicated to realizing the Chinese dream through human practice. The outstanding qualities of the revolutionary martyrs, who struggled unremittingly for national rejuvenation, defended national interests without fear of sacrifice, regarded national honor as the highest, and sacrificed themselves for national interests, are a steady stream of spiritual nourishment.

In the context of steady economic growth and in-depth development of globalization, economic, political and cultural exchanges between countries are becoming increasingly close, and multicultural trends of thought collide with each other. It is particularly important to guide students to establish a correct world outlook, values, and outlook on life at different stages of universities, middle schools, and primary schools. Red culture contains correct moral values and true moral emotions, which not only have a great effect on students, but also have a good enlightenment effect on ideological and political teachers. With the help of advanced models in the red culture, rationally organizing and carrying out teaching, on the one hand, it can promote teachers to effectively combine social value with personal value and form a good moral character; on the other hand, it can promote the growth of students and lay a solid foundation for the construction of a harmonious society. In addition, the red culture also contains rich scientific connotations, which can help teachers understand the truth of Marxism more clearly, and then learn actively and analyze scientifically when facing problems. This will not only expand the breadth of teachers' knowledge, but also help students form the correct three views and realize that teaching and learning can benefit each other.

Red culture covers rich and diverse resources, including both "physical" red culture and "non-physical" red culture; both can be directly displayed to students, and they need to be guided to understand deeply. Individuals' understanding of things is also gradual and gradually rising, which also contributes to the deviation of students' cognitive level, emotional generation speed, and practical ability. Most of the primary school students stay at the stage of concrete image thinking and prefer to obtain information from intuitive things. At this stage, students should be guided to have a shallow understanding of red culture, and a good emotional tone for students should also be established. The middle school stage is in the transition period between concrete image thinking and abstract thinking, and it is also a critical period connecting the previous and the next. It is an important method to tap the value of ideological and political education of red resources for teachers of ideological and political courses to go back to the red relics and obtain first-hand literature. At present, teachers of ideological and political courses focus on the exploration of red culture at the theoretical level. In order to make ideological and political courses full of historical thickness and ideological depth, and to revisit the red relics, it is very necessary to do a good job in the field research of red culture.

2.2 The practical path of integrating red culture into the integrated construction of ideological and political courses in universities and middle schools and primary schools

By revisiting the red relics, teachers of ideological and political courses can obtain first-hand pictures and materials, making ideological and political courses more tense and convincing. In addition, let "people with faith speak faith", teachers of ideological and political courses can find educational resources in the red relics, and further tap the value of red cultural resources. Although the deepening of the new curriculum reform has provided many beneficial teaching guiding ideologies and methods for ideological and political education in colleges and universities, no matter what kind of brand-new teaching ideas and methods are to be widely used in teaching practice, it takes a long period of time. Therefore, at present, ideological and political teachers in colleges and universities still use traditional teaching ideas to guide the construction of ideological and political integration courses. The educational value of culture is difficult to be fully reflected.

For example, under the background of informatization, more and more informatization teaching technologies and means have been introduced into the ideological and political classrooms of colleges and universities, providing convenient tools and rich teaching resources for the teaching of ideological and political teachers. The important value of integrating red culture into the integrated construction of ideological and political courses highlights the urgent need for the integration of the two. The principled requirements for the integration of the two have pointed out the direction for the integration of red culture into ideological and political courses. It is necessary to systematically plan the practice path from the aspects of refining top-level design, focusing on curriculum teaching, improving team building, and building a collaborative system, so as to create a deep integration system of red culture and the integrated construction of ideological and political courses in universities, middle schools and primary schools.

Social practice should conform to the characteristics of students at different stages, such as organizing primary school students to sing red songs and tell red stories, leading middle school students to visit revolutionary memorial halls and revolutionary education bases, and college students to conduct research individually or in groups. Measuring the red ruins with your feet and feeling the red revolutionary spirit, students at different school stages can have personal insights, so as to achieve the purpose of ideological and political education, so that the red revolutionary spirit can be inherited and carried forward. In the previous teaching mode, most teachers focus on indoctrination education, blindly explaining theoretical knowledge, while students accept it passively, which not only affects students' enthusiasm for learning, but also the teaching effect is not ideal. In the context of the integration of ideological and political courses in colleges and universities, teachers should actively make changes and let students actively accept red education with the help of rich social practice.

In the choice of activity methods, not only can students carry out field practice, but also allow them to "cloud practice", such as letting students listen to various red stories and revolutionary songs through the Internet. Various regions can carry out red culture-themed teacher skill competitions, micro-classes, and excellent courseware production competitions across school stages, to open up communication channels for teachers and enhance connectivity between school stages. The fourth is teachers' self-learning. As a professional teacher of ideological and political courses, teachers at all stages of schooling must truly take learning, using, and teaching red culture well as their teaching pursuit. First, we must continuously improve our political literacy, maintain a firm political stance, and truly believe in red culture. "VR+ Ideological and Political Course" not only makes the red culture alive, but also enhances the affinity and experientiality of the ideological and political course. With the rapid development of self-media on campus, the characteristics of fast communication and good interaction effect of self-media meet the needs of students' ideological and personality development in the new era. Schools should actively combine red culture and self-media into the teaching of ideological and political courses, enrich the teaching forms of ideological and political courses, and spread red culture in a way that students like to hear and see.

3. CONCLUSION

To sum up, under the background of the new era, it is necessary to rationally integrate red culture into the integrated construction of ideological and political courses in colleges and universities. To this end, the relevant parties should establish an overall awareness, start from the goals, content, and other aspects, and reasonably introduce relevant means to promote its construction. At the same time, it is necessary to dig deep into the local high-quality red cultural resources and integrate them into the specific situation in order to enrich the teaching content and form a subtle influence on the students. With the red culture as a breakthrough to build a collaborative linkage system, promote the ideological and political courses of universities, middle schools, and primary schools. The integrated construction can continue to be sublimated in the joint efforts of all people, and continuously enhance the effectiveness of ideological and political education.

4. REFERENCES

[1] Xiao Yaqin, Liao Yaqin. Path Analysis of Yongzhou Red Culture Integrating into the Integration of Ideological and Political Courses in Universities, Middle Schools, and Primary Schools [J]. Chinese Science and Technology Journal Database Scientific Research, 2022(5): 4.

[2] Zhang Kaiqin. Research on the principle and path of integrating red culture into the ideological and political courses of universities, middle schools, and primary schools [J]. Journal of Yuzhang Teachers College, 2021, 36(5):5.

[3] Li Kanshuai, Zhou Xin. Analysis on the Ideological and Political Path of Integrating Red Culture into College Curriculum from the Perspective of "Three-Comprehensive Education" [J]. Tomorrow, 2021(22): 0141-0142.

[4] Shen Yimin. Research on the path of integrating red culture into ideological and political courses from the perspective of large, medium, and small integration [J]. Chinese Science and Technology Journal Database (Full Text Edition) Education Science, 2023(4):4.

[5] Lai Ning. Research on the Integration of Red Culture into Ideological and Political Courses in Colleges and Universities [J]. Journal of Jiamusi Vocational College, 2022, 38(3):10-12.

[6] Zhao Li. Research on the integration of Ningxia's red cultural resources into the ideological and political courses of universities, middle schools, and primary schools [J]. Chengcai, 2022(2):33-34.

[7] Du Yuanyin. The path of integrating Guangyuan red culture into the ideological and political courses of universities, middle schools, and primary schools [J]. Overseas Digest, 2022(18): 3.

[8] Guan Guicui and Zhang Pingli. Exploration on the integration of Huxiang red culture into the ideological and political courses of universities, middle schools, and primary schools [J]. Theoretical Observation, 2022(4):141-143.

[9] Sun Xiaomeng Jun. A Preliminary Study on the Integration of Jiaodong Red Culture into the Ideological and Political Courses of Universities, Middle Schools, and Primary Schools [J]. Journal of Social Sciences of Jiamusi University, 2021, 039(005):201-203.

[10] Zhang Guangwei. The Path of Local Red Cultural Resources Empowering the Integrated Construction of Ideological and Political Courses——Taking Qujing City, Yunnan Province as an Example [J]. Xueyuan, 2023, 16(4): 4.

[11] Gao Jie. Reflections on the Integration of Red Culture into Ideological and Political Courses [J]. Middle School Politics Teaching Reference, 2021(47): 2.

[12] Shen Hongyan, Zhang Guofu. The path of integrating red culture into the teaching of ideological and political courses in colleges and universities [J]. 2020.

[13] Yu Xiaobing, Cao Yu. Exploration and Thinking of Integrating Red Culture into Practical Teaching of Ideological and Political Courses [J]. Cultural Industry, 2021, 000(015):P.121-123.

[14] Wang Fumei. Research on the Importance and Path of Integrating Red Resources into the Integrated Construction of Ideological and Political Courses in Universities, Middle Schools, and Primary Schools [J].[2023-06-17].

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Leading Dance Teaching in the New Era with Aesthetic Education

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Abstract: With the development of the times, aesthetic education enriches people's spiritual life from the perspective of educating people and aesthetics, and comprehensively improves people's comprehensive quality. Aesthetic education in the new era mainly regards schools as the main front of education and combines artistic means to carry out aesthetic education. This article analyzes the application value and development status of dance aesthetic education under the background of aesthetic education connotation and national aesthetic education policy. Therefore, exploring the path of aesthetic education penetration in dance teaching in colleges and universities is of great significance to the cultivation of students' character and personality. This paper analyzes the role of aesthetic education penetration in dance teaching and thinks about the basic path of aesthetic education penetration in dance teaching.

Keywords: Leading dance, new era, aesthetic education

1. INTRODUCTION

Dance is a kind of human performance art. It can not only cultivate students' aesthetic concept, but also shape students' body to a certain extent, so that students can create beauty in their own way while discovering and feeling beauty, to effectively improve their own aesthetics. Practical ability. At present, the content of dance teaching is relatively rich, and there are many types of teaching, such as: classical dance, modern dance, folk dance, etc. Before teaching, teachers should clarify the teaching objectives for students according to their actual situation. For example: in the process of enrolling new students, it is necessary to cultivate students' dance skills so that they can establish correct cognition, realize the importance of dance learning, and better complete related tasks in classroom teaching. At the same time, teachers should train students in basic skills, increase teaching guidance, and formulate dance choreography plans. The different styles and types of dance art are closely related to people's group knowledge and ideas.

By leading students to grasp and deeply understand different types of dance styles, college dance teachers can enable students to continuously improve their own aesthetic ability in a subtle way, and help students understand the aesthetic methods of different types of dances and the ideas behind their movements. This will improve students' understanding of culture and art. Dance aesthetic education is an indispensable and important part of the Chinese aesthetic education curriculum system. It plays an irreplaceable role in enhancing students' aesthetic awareness, deepening emotional education, cultivating the soul, and stimulating imagination and creativity. At the same time, dance aesthetic education also promotes the popularization and development of aesthetic education to a certain extent. Infiltrating moral education into primary art education is the embodiment of the new curriculum concept and the need of modern education. To highly promote the spirit of art, it is not only necessary to combine the characteristics of primary school students and dig deep into the teaching materials, but also to give full play to the unique functions of primary school art teaching and integrate aesthetic education and moral education.

Students in elementary school especially like to watch animation and film and television appreciation. Teachers can select representative animation stories and clips when creating courses and match them to their liking. In the process of appreciating the works, they can subtly instill correct the ideological concept, arouses the emotional resonance of the students, sums up the prompts in a timely manner, makes the students understand, and achieves the purpose of moral education for the students. During the period of practical teaching, dance teachers should formulate a comprehensive educational plan, clarify the key content, and carry out strict management and control on it. First, teachers can arrange dance competitions for students, requiring students to practice related skills and better participate in competition activities. Secondly, teachers also need to cultivate students' practical application ability of theoretical knowledge, regularly arrange students to practice in kindergartens, so that they can master various basic skills, improve their practical ability, and job ability, accumulate teaching work experience, and enhance their employability.

Finally, the school can also invite some teaching experts to the school to guide students, so that students can fully understand the situation of children's dance teaching, improve their practical ability and understanding ability, so that they can form a correct understanding of the position and achieve good teaching purposes. Local colleges and universities in dance teaching, students are first required to have aesthetic thoughts and aesthetic concepts. Teachers need to impart ideas and concepts of beauty and cultivate students' aesthetic consciousness. Because different types of dances have different artistic styles, when students understand and learn dance, they should first have the awareness of aesthetics, that is, the ideology of "dancing with a sense of beauty".

2. THE PROPOSED METHODOLOGY

2.1 The role of aesthetic education infiltration in dance teaching

To cultivate students' aesthetic awareness in dancing, teachers need to let students have an aesthetic interest in different dance aesthetics before giving lectures and make them comprehend and love different artistic styles of dance

aesthetics. Form a mechanism to encourage students to have noble inner beauty. Dance aesthetic education is different from the traditional dance education model. It has changed from pure dance professional training to aesthetic education as the educational goal, from the original professional talents to applied and innovative talents and pays attention to society and people's livelihood from the perspective of dance. Pay attention to quality education and training. Schools at all levels and stages should continue to deepen the research on aesthetic education theory and talent training, strengthen the construction of aesthetic education teachers, teaching materials, and curriculum, and improve the evaluation and assessment mechanism. "Anywhere can be a classroom, and there can be a classroom anywhere." In the past, art classes in primary schools were all in the classroom, with the teacher facing the textbooks, the students flipping through the books, the teacher drawing on the blackboard, speaking orally, and then asking the students sitting at the desk and copying, or associating with the impressions in the mind, or looking for pictures everywhere for assistance, the rigid and rigid way lacks emotional experience, and it is difficult to mobilize the enthusiasm of students, let alone creation.

Therefore, in the teaching of each class, teachers should take various methods such as visiting, sketching, and collecting folk songs according to the objectives of the teaching materials, fully apply modern teaching methods, and use a wide range of channels to understand. During the dance teaching period of preschool education majors, teachers should carry out comprehensive reforms to the education methods and formulate perfect management and control programs. First, teachers should ensure that the teaching process is interesting, rationally use multimedia tools to assist in teaching activities, and play videos about dance choreography in kindergarten teaching for students, so that students can master relevant skills and improve their job ability. Dance teaching based on aesthetic education should not be limited to the two dimensions of movement teaching and cultural transmission.

On the one hand, students are subtly influenced by aesthetic education, and teachers must make students the best experiencers of beauty. Another important direction is to enable students to actively discover beauty in life and art. Because students often "lack the eyes to discover beauty", teachers need to cultivate students' ability to actively appreciate beauty. Therefore, aesthetic education should not only be limited to the rehearsal of dance movements, nor should it be limited to the performance of dance repertoire but requires students to be able to discover the art of dance and other arts on the premise of having aesthetic interests and knowing aesthetic norms. And the beauty in the things to appreciate in every aspect of life. Through the aesthetic education training mode of "basic art knowledge and basic skills + art aesthetic experience + art special expertise", we will focus on improving students' core literacy.

2.2 The Connotation of Aesthetic Education and the Feasibility of School Aesthetic Education Policy

The core literacy training goals for students of different ages are different. It is necessary to cultivate the aesthetic taste of primary school students, the aesthetic ability of middle school students, and the aesthetic quality of college students. Different levels of core literacy training can guide students to establish a correct view of history, family and country, and national culture, and enhance cultural self-confidence. Dance aesthetic education has practical significance for the improvement of people's core literacy. Allowing students to be in nature and experience it not only improves interest, but also draws works full of real feelings and more realistic effects, which can exercise students' ability of observation, thinking and creation. For example, organize campus sketching activities, feel the beauty of nature and the most natural colors in nature with hands, eyes, and body on campus, feel that the beauty of color in art is extracted from nature, and feel the beauty brought by nature. With the beauty of hearing, vision and touch, the students used their brushes to draw beautiful, fresh, and natural colors one after another under the blue sky and white clouds.

In the process of designing and arranging class hours, preschool education schools need to plan according to the actual learning needs of students to improve the effectiveness of class hour management. First, when designing class hours, we should extend the practical teaching time according to the learning characteristics of preschool students and provide them with sufficient training time so that students can fully master dance skills during the practice process. Since the popularization and promotion of quality education, college education has paid more and more attention to the comprehensive quality of students. It is an indispensable link to explore the path of aesthetic education penetration and to teach students in accordance with their aptitude in the process of dance teaching. In the actual teaching process, teachers need to Enough attention is paid to the improvement of students' practical ability and the development of ideological character, so that students can personally feel the essence and charm of dance and implement the teaching mode of teaching students in accordance with their aptitude for students with different foundations and different physiques.

First, play the wonderful animation and music of the song "little red riding hood", let the students appreciate the image of Little Red Riding Hood, and hum along with the cheerful rhythm to start associations, so that students can accept questions in a relaxed and happy atmosphere: "Children, I am Little Red Riding Hood Let’s take a look, what do you see?” Then, various kinds of hats were displayed, and students were asked to distinguish and compare them. By appreciating and comparing, students can better understand the shape, color, and accessories of hats, and accumulate materials for making hats. . In the course, students are asked to display the hats they made, and groups or individuals evaluate the works in various ways such as self-evaluation and mutual evaluation.

Finally, let the students use their imagination and think about "what will the hats be like in the future", they can write ideas and draw design drawings, to further improve the students' imagination and creative ability. Since the development of art education, it is no longer a single professional skill education, but has transformed into a diversified quality education for all students. Art education is no longer a staged short-term education, but an artistic edification and cultivation that accompanies students throughout their lives. In the dance art education under the perspective of aesthetic education, "cultivating morality and cultivating people" should be taken as the fundamental educational goal, and dance should be used as a means to combine traditional Chinese culture and Chinese aesthetics to reflect the collective strength, spiritual strength, and cultural strength of the Chinese people. , so that students have their own beauty, beauty and beauty together, establish a correct and unique artistic concept and aesthetic concept, and add a touch of artistic color to the life of students.

3. CONCLUSION

To sum up, with the continuous deepening of quality-oriented education, the penetration of aesthetic education in dance teaching has been widely concerned by various colleges and universities. The penetration of aesthetic education into dance teaching can not only improve the quality of students' dance learning, but also improve the quality of students' learning. Aesthetic concepts, the ability to create beauty and shape shaping all play an important role in promoting and help students form correct values. And when infiltrating aesthetic education, teachers should combine aesthetic education ideas with dance forms, teach students in accordance with their aptitude, create a good aesthetic education environment for students, and permeate the value of education and the connotation of aesthetic education in curriculum setting and knowledge imparting. And stimulate the sense of innovation, and fully tap the inner potential of students. Educating people with culture and dancing has become a characteristic education that improves the aesthetic and humanistic quality of the whole people and improves the comprehensive quality of students.

4. REFERENCES

[1] Ren Zhili. Teaching dance and educating people to promote teaching through evaluation——The reform and practice of teaching evaluation of dance aesthetic education in primary and secondary schools in the new era [J]. Literature Youth, 2021, 000(035):P.1-1.

[2] Du Rui. Research on the Significance of Aesthetic Education in College Dance Teaching [J].[2023-06-22].

[3] Long Fang. Research on the Sustainable Development of Children's Sports Dance Training Institutions in Minority Areas of Qiannan Prefecture [D]. Jiangxi Normal University, 2021.

[4] Li Yi. Educating Morality through Aesthetics—— Research on Innovative Teaching Strategies of Music in Secondary Vocational Education [J]. Literature Youth, 2020, 000(028):P.1-1.

[5] Lin Ping. Analysis of the dance art education model under the perspective of aesthetic education in the new era [J]. Popular Literature and Art: Academic Edition, 2022(20): 3.

[6] Liu Hao. Exploration on the Model and Path of Dance Aesthetic Education in Higher Vocational Colleges—— Taking Liaoning Mechanical and Electrical Vocational and Technical College as an Example [J]. Vocational Education, 2022(29): 2.

[7] Ma Mingjian. Strengthening school dance education to promote the construction of aesthetic education in the new era [J]. Overseas Digest Academic, 2021. DOI: 10.12331/j.1003-2177.2021.08.045.

[8] Huang Junxing, Lin Meimao. Marxist aesthetic education concept and school aesthetic education construction in the new era [J]. Journal of the Party School of Fujian Provincial Committee of the Communist Party of China (Fujian Administration College) [2023-06-22].

[9] Lu Juanjuan. Exploration of physical and mental education in dance aesthetics in the new era from the perspective of psychosomatics [J]. Shang Wu, 2022(20): 3.

[10] Jin Jin, Wang Ziqing. Enlightenment and Reflection of Constructivist Learning Theory on Dance Aesthetic Education Teaching in the New Era--Taking Quality Education Dance Class as an Example [J]. Art Education, 2021(7): 4.

[11] Xu Yanran. Research on Children's Dance Aesthetic Education and Teaching in the New Era [J].[2023-06-22].

[12] He Shifei. The concept of diversified setting of dance aesthetic education courses in colleges and universities in the new era [J]. Art Education, 2022(8): 4.

[13] Sang Zhaoshuai. Research on dance aesthetic education under the background of the new era [J]. Tomorrow, 2019(26): 1.

[14] Zhu Jun. Leading the Poetic Development of Schools with Aesthetic Education Thoughts in the New Era [J]. School Management, 2022(2): 4.

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Research on Physical Education Teaching and Sports Training for College Students

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Abstract: After the country proposed the Sunshine Sports, physical education in colleges and universities started to promote the teaching reform work and built a sunshine sports teaching model in line with the national sports strategy, which achieved good results. In view of the problems existing in traditional physical education teaching and sports training, it is necessary to use the sunshine physical education teaching to change the current teaching status, and to fully exert the positive role in the process of physical education teaching and sports training by building the ecological environment of the sunshine physical education teaching and innovating the forms of activities in and out of the sunshine physical education, enhance students' physical fitness and cultivate students' sportsmanship. This article mainly provides an overview of the concepts, similarities and differences, and complementary relationships between physical education teaching and sports training in colleges and universities.

Keywords: PE, sports training

1. INTRODUCTION

Sunshine sports is a new national requirement for physical education in the new era. Promoting sunshine sports is conducive to cultivating college students' physical literacy, realizing curriculum diversification, building a harmonious teacher-student relationship, and then improving the shortcomings of the current physical education teaching model. In this regard, colleges and universities should actively recognize the importance of sunshine sports education, constantly improve its guaranteed mechanism, and promote the sustainable development of sunshine sports in colleges and universities. With the continuous advancement of the reform process of physical education in colleges and universities, the relationship between physical education and sports training has become more and more complicated. Control the proportion of competition. Physical education in colleges and universities mainly shoulders the important responsibility of improving students' physical fitness and ensuring students' physical health. The application of competitive sports in the physical education process can effectively stimulate students' interest in learning and continuously optimize the physical education curriculum. Therefore, in the process of physical education teaching reform at this stage, teachers need to deeply analyze the internal relationship between physical education teaching and sports training in colleges and universities, and continuously improve and optimize the content and teaching mode of physical education teaching.

At present, many colleges and universities show low attention to physical education, which has a negative impact on education, mainly in two aspects. On the one hand, from a macro perspective, the importance of physical education has not been recognized at the strategic level, resulting in a long-term lack of investment in educational resources and insufficient investment in sports infrastructure construction. Facing the continuous expansion of colleges and universities, it reflects the contradiction between the two the number of sports facilities is difficult to meet the needs of students for exercise, and the teacher-student ratio is seriously unbalanced. Over time, compared with other institutions, the development of physical education lags.

On the other hand, from a micro perspective, for non-sports colleges and universities, the quality and level of physical education teaching will not play a decisive role in the ranking of colleges and universities, nor can they be shared. The internal motivation of colleges and universities to invest in physical education is insufficient, resulting in squeezed time for physical education teaching, and weak support for physical education activities inside and outside the class. Even many colleges and universities directly cancel the physical education curriculum setting for postgraduate education, which reflects the problem of insufficient attention to physical education. During physical education, to ensure the safety of students and the mastery of sports skills, the teaching process should reflect the characteristics of system, unity and education. Among them, systematic mainly means that teachers formulate relevant teaching plans according to the actual physical fitness of students.

College physical education courses are mainly aimed at college students, whose body functions are well developed. During the arrangement of physical education activities, the order from simple to difficult should be adopted to prevent damage to students' physical fitness caused by excessive physical training. The unity in physical education mainly refers to the synergistic growth of physical quality and sportsmanship in the process of physical education teaching. Teachers are required to pay attention to the cultivation of students' physical and psychological qualities in the process of physical education teaching, so that students can be more active and active. Invest in physical learning activities to help students form a healthier mental state and achieve the goal of growing both physical and psychological quality.

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2. THE PROPOSED METHODOLOGY

2.1 The Similarities Between Physical Education Teaching and Sports Training in Colleges and Universities

Educational mainly means that in the process of physical education, physical activities should be aimed at improving students' physical fitness, combined with teaching principles and teaching experience, to continuously improve the teaching content and teaching mode, to ensure that physical education courses can cultivate applied talents with comprehensive qualities. play a more active role in the process. During physical education, to ensure the safety of students and the mastery of sports skills, the teaching process should reflect the characteristics of system, unity and education.

Among them, systematic mainly means that teachers formulate relevant teaching plans according to the actual physical fitness of students. College physical education courses are mainly aimed at college students, whose body functions are well developed. During the arrangement of physical education activities, the order from simple to difficult should be adopted to prevent damage to students' physical fitness caused by excessive physical training. The unity in physical education mainly refers to the synergistic growth of physical quality and sportsmanship in the process of physical education teaching. Teachers are required to pay attention to the cultivation of students' physical and psychological qualities in the process of physical education teaching, so that students can be more active and active. Invest in physical learning activities to help students form a healthier mental state and achieve the goal of growing both physical and psychological quality.

Educational mainly means that in the process of physical education, physical activities should be aimed at improving students' physical fitness, combined with teaching principles and teaching experience, to continuously improve the teaching content and teaching mode, to ensure that physical education courses can cultivate applied talents with comprehensive qualities, play a more active role in the process. Physical education belongs to school physical education activities. Through the exercise of various body functions, students' physical fitness is enhanced, and students' physical education theory knowledge, sports skills and sportsmanship are imparted to students. It is a purposeful and planned educational process, mainly for student groups. Students with different physical qualities can be trained and feel the fun of physical exercise.

Sports training belongs to competitive sports training. It mainly aims to maximize the potential of the human body in terms of physical fitness, psychology, and athletic ability, and obtain better sports performance. Most of the training objects are students with high physical fitness and athletic talents. In the process of physical training, it is necessary to use activities in line with physical training to maximize the physical potential of athletes. Colleges and universities implement sunshine sports teaching and guide students to participate in sports training. It is necessary to rely on classroom teaching, consolidate the theoretical knowledge base of students, and use extracurricular teaching to further expand and supplement classroom teaching, so that most students can truly realize sunshine sports and exercise every day. A basic goal for an hour. The current physical education classroom teaching in colleges and universities mainly focuses on traditional sports such as table tennis, football, badminton, and swimming, which are relatively less attractive to students.

2.2 Complementary Ways of Physical Education and Sports Training in Colleges and Universities

In this regard, college physical education teachers can integrate aerobics, martial arts, yoga, Tai Chi, and other physical education content, introduce traditional folk physical education resources, stimulate students' interest and enthusiasm in participating in sunshine sports learning, and provide students with a variety of sports training items. In the process of implementing extracurricular teaching, colleges and universities should give full play to the role of campus cultural activities, set up sunshine sports associations and sunshine sports clubs in colleges and universities, organize sports knowledge competitions and sports culture festivals on campus regularly through associations and clubs, and strengthen the role of sunshine sports in the campus. The dissemination on campus provides students with a variety of extracurricular sports training forms, attracts more college students to actively participate in sunshine sports activities, and promotes the realization of educational goals.

Promote the two-way development of students' physical quality and psychological quality, form the concept of lifelong physical exercise, and better adapt to future study and work life; while sports training is mainly aimed at cultivating high-quality athletes, through more scientific exercise methods, improve athletes' various physical functions, master sports skills more firmly, obtain more excellent sports results, and lay a solid foundation for accelerating the construction of sports in our country. First, re-establish the teaching concept and guiding ideology, always follow the people-oriented, aim to promote students to participate in sports events happily, carry out in-depth communication and interaction between teachers and students based on the perspective of equality between teachers and students, strengthen students' sports learning and enthusiasm for sports, and innovate traditional and Instill theoretical knowledge-based teaching concepts, and then under the promotion of sunshine sports, promote college students to improve their physical and mental health in pleasant physical education and exercise.

Second, for the construction of the teaching content system, the practicability, practicality, and feasibility of the teaching content should be emphasized. To fundamentally improve the quality and efficiency of physical education teaching in colleges and universities, relevant physical education teachers should do a good job of reasonably using sports training methods to effectively improve students' physical fitness, help students develop good physical exercise habits, and master certain sports skills. In the actual theoretical teaching activities, the theoretical education is organically combined with appropriate sports training methods, and the physical quality and learning needs of students are considered. The content of physical education is reasonably designed to ensure that students' physical and psychological qualities are steadily improved. To meet the higher requirements for new talents put forward by national and social construction.

To fundamentally improve the quality and efficiency of physical education teaching in colleges and universities, relevant physical education teachers should do a good job of reasonably using sports training methods to effectively improve students' physical fitness, help students develop good physical exercise habits, and master certain sports skills. In the actual theoretical teaching activities, the theoretical

education is organically combined with appropriate sports training methods, and the physical quality and learning needs of students are considered. The content of physical education is reasonably designed to ensure that students' physical and psychological qualities are steadily improved. To meet the higher requirements for new talents put forward by national and social construction.

3. CONCLUSION

In the physical education teaching and sports training in colleges and universities in my country, the full implementation of the sunshine sports education model is a major systematic project, which requires high attention from the leadership of colleges and universities, and joint efforts of physical education teachers to improve the existing teaching objectives, teaching content, teaching methods and assessment. The evaluation system respects the individual characteristics of college students. Teachers need to conduct in-depth analysis of routine physical education and sports training methods, combine physical education and sports competition with students' interest in physical education, and ensure that the level of physical education in colleges and universities can better meet the needs of students. Social development puts higher demands on the comprehensive quality of college students.

4. REFERENCES

[1] Yin Ruixin, Zhu Hongjiang, Sui Qiang. Research on the Interactive Development of Physical Education Teaching and Sports Training in Colleges and Universities——Comment on "Physical Education and Sports Training in Colleges and Universities" [J]. Contemporary Educational Science, 2015, 000(008): Insertion 2.

[2] Zhang Jianbin. Research on College Physical Education Teaching and Sports Training Strategies Based on the Concept of "Sunshine Sports" [J]. Contemporary Sports Science and Technology, 2022, 12(35): 4.

[3] Liu Qiaofang, Niu Yantao. Research on Physical Education Teaching in Colleges and Universities Combined with Physical Training——Comment on "Physical Education and Sports Training in Colleges and Universities" [J]. Contemporary Education Science, 2015 (12): 1.DOI:CNKI:SUN:SDJK.0.2015 -12-022.

[4] Li Jian. Research on the Interaction and Realization of Physical Education Teaching and Sports Training in Colleges and Universities [J]. Tomorrow, Fashion, 2017(21): 1.

[5] Li Yuhang. Research on the Harmonious Development Model of Physical Education Teaching and Sports Training in Colleges and Universities [J]. Boxing and fighting, 2020(6): 2.

[6] Zhang Jianxin, Shi Xiaoyu. Application Research on the Concept of Healthy Physical Fitness in Track and Field Teaching of Physical Education Majors in Colleges and Universities——Comment on "Multi-directional Research on Track and Field Sports Training and Teaching" [J]. China Oils, 2021(1): 158-158 .

[7] Chen Lianzhen. Research on the Current Situation and Strategies of Outdoor Sports Training for College Students in my country [J]. Sports Fashion, 2021, 000(007):P.87-88.

[8] Xiao Dehou. Research on the cultivation of college students' psychology and sports quality based on the expansion training of physical education [J]. Youth Sports, 2014(11):3.DOI:CNKI:SUN:QSTY.0.2014-11-045.

[9] Zhang Hui. Research on Outdoor Sports Training in College Physical Education Teaching [J]. Changjiang Series, 2017(13): 1.

[10] Huang Yuning. Multi-angle Research on Physical Education Teaching and Training of College Students——Comment on "Physical Education and Sports Training in Colleges and Universities" [J]. Contemporary Education Science, 2015(22):1.DOI:CNKI:SUN:SDJK.0.2015 -22-019.

[11] Liu Jie. Research on the Problems Faced by Physical Education Teaching and Their Solution——Comment on "Physical Education and Sports Training in Colleges and Universities" [J]. Contemporary Education Science, 2015(9):1.DOI:CNKI:SUN:SDJK. 0.2015-09-019.

[12] Wang Jiaqi. Research on Physical Education Teaching and Sports Training in Colleges and Universities from the Perspective of "Sunshine Sports" [J]. Journal of Huainan Vocational and Technical College, 2022, 22(4):112-114.

[13] Liu Wei. Research on the Interactive Integration and Development of Physical Education Teaching and Sports Training in Colleges and Universities [J]. Sports Time and Space, 2017, 000(021): 170.

[14] □Jin. Research on the Construction of College Students' Amateur Sports Teams——A Case Study of the Departments of Agricultural Colleges and Universities in Yunnan Province[J]. Academic Exploration, 2014(05):112-115.DOI:CNKI:SUN:YXST.0.2014 -05-024.

[15] Sun Taiwei. The development status and research of college students' badminton in northern Henan [D]. Henan Normal University [2023-06-15].

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Innovative Teaching Research on Constructing Higher Vocational Exhibition Management Curriculum System under the Background of New Curriculum Reform

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Abstract: This article aims at the related issues in the construction of the vocational exhibition curriculum system, insists on the cultivation of professional ability as the core, through the in-depth cooperation between schools and enterprises, jointly builds the curriculum, continuously optimizes and innovates the curriculum system, does a good job in the overall design of the curriculum, improves the quality of curriculum construction, and explores effective methods and ways to improve the design optimization of higher vocational exhibition courses. Combined with the job requirements of the exhibition industry talents, the "five-in-one" core competence model was constructed, the core competence indicators of exhibition planning and management were determined, and the curriculum system of the "five-in-one" core competence was constructed through reverse design, to promote the development of higher vocational colleges. The construction of the exhibition professional course system provides a theoretical basis for the training of exhibition talents.

Keywords: Innovative Teaching, Higher Vocation, Exhibition Management, Curriculum System, New Curriculum Reform

1. INTRODUCTION

As a sunrise industry, the convention and exhibition industry has entered a period of rapid development in my country, and has gradually formed the "Bohai Rim, Yangtze River Delta, Pearl River Delta, Northeast, and Midwest" centered on the five major exhibition cities of Beijing, Shanghai, Guangzhou, Zhuhai, and Chengdu. "Five exhibition economic industry belts. The rapid development of the exhibition industry has an increasing demand for exhibition talents. As an important training base for first-line exhibition talents, higher vocational colleges should do a solid job in the design of professional curriculum systems to ensure the quality of talent training.

Higher vocational education should "serve development as the purpose and promote employment as the orientation". The more obvious adherence to employment orientation is a major difference between higher vocational education and undergraduate education, and it also determines that vocational ability training should be integrated into all aspects of higher vocational education. Only in this way can students' employability be continuously improved, students can be better employed after graduation, and provide continuous and strong guarantee for the long-term development of students' careers. As the main carrier of professional construction, curriculum construction should highlight the professional characteristics of higher vocational educations, do a good job in overall design for professional development.

As a major with a short start-up practice, this is especially true for the exhibition major. Today, with the rapid development of new technologies such as Internet +, VR, and MR, virtual exhibitions and virtual exhibitions continue to refresh the popularity of exhibitions and become the wind vane for the development of high-quality exhibitions. In the process of talent training, the exhibition major should firmly grasp the wind vane of industry development and the development trend of new technologies, apply them to teaching, closely integrate with enterprises, enrich the material resource library of virtual simulation teaching, and form an exhibition major Unique teaching resource. Based on the construction of exhibition planning and management majors in various colleges and universities, this study collected the core course data of exhibition planning and management majors in 5 benchmark higher vocational colleges in the Greater Bay Area and arranged similar courses. There are many and complicated, repeated offerings, and unreasonable problems in the offering of professional core courses.

The training goal of higher vocational colleges is to cultivate a group of first-line talents with sufficient theory in knowledge, ability and quality structure, solid professional basic knowledge, excellent professional skills, and strong adaptability. Under the guidance of this goal, students majoring in exhibition planning and management in higher vocational colleges need to obtain one or more professional qualification certificates in the exhibition industry in addition to obtaining a graduation certificate during their schooling, so that they have the qualifications for exhibition positions ability to serve. Different from academic certificates, vocational qualification certificates in the exhibition industry more directly and accurately reflect the actual work standards and operating specification requirements of the exhibition industry. The core position of the core courses is not prominent, and the content is superimposed from time to time. Most of the professional teachers come from other disciplines, and the knowledge of exhibitions is limited, which leads to the curriculum setting with a strong background of related disciplines; when the courses are implemented, teachers' pay more attention to the theoretical knowledge of the subject. Construction and teaching, not enough emphasis on the cultivation of professional ability.

2. THE PROPOSED METHODOLOGY

2.1 The principles followed in the design of the project system design of the exhibition planning and management specialty in higher vocational colleges

Higher vocational exhibition education should also establish a curriculum concept with vocational ability training as the core from various aspects such as curriculum system design,

curriculum classroom teaching, and curriculum evaluation, and strive to provide strong conceptual support for the cultivation of high-quality technical and technical talents required by the industry. From virtual to reality, for higher vocational students who have no work experience, more equipment that needs to be continuously adjusted and embedded in the training room. Due to the lack of practical experience of students, it is necessary for students to carry out a series of teaching processes such as understanding-simulation-proficiency-innovation to promote the formation of students' professional ability. To build a virtual model with a single virtual device, it also needs to be equipped with 3D printers and other equipment to form a real activity scene to facilitate the completion of planning tasks such as process arrangement and personnel distribution.

Composed of "active-active-collaboration-skills-cooperation", it is a further expansion and enrichment of the core circle and the sub-core circle, and it is also a word pair or word pair that has a customary collocation relationship with the core and sub-core circle words in the recruitment texts of exhibition companies. Words of the same part of speech, that is, the social network and semantic network of the official website recruitment texts of exhibition-related companies, through the three-circle structure of "core-sub-core-periphery", will better display and reflect the ability demand structure of exhibition-related companies on the current stage of exhibition talents , to provide a basis for the reverse design of the core curriculum system.

My country's convention and exhibition industry started relatively late, and the history of convention and exhibition education is less than ten years. To cultivate high-skilled convention and exhibition talents, we should learn from and learn from the convention and exhibition education models of countries with advanced convention and exhibition industries such as Germany, Singapore, and France, and introduce the latest development of convention and exhibition from abroad. At the same time, whether the curriculum of the exhibition planning and management major in higher vocational colleges can be in line with the talent demand standards of the international exhibition industry is also whether the standards and standards for the design of the professional curriculum system of exhibition planning and management in higher vocational colleges can be improved. One of the important conditions of quality. The construction of higher vocational majors is mainly to serve the regional economic development and provide high-quality technical and skilled talents for industrial enterprises.

The convention and exhibition industry, as a new industry and an industry that gathers new knowledge and technologies, is developing rapidly. The exhibition education should be adjusted in a timely and rapid manner, and the curriculum system should be continuously optimized to keep up with the latest developments in the industry so that graduates can understand the latest developments in the industry. , master the latest technology. In particular, the emergence of new economic technologies such as Internet +, virtual reality, and artificial intelligence has profoundly affected the exhibition industry. Nowadays, online, and offline exhibitions are developing rapidly, and online and offline exhibitors have become the norm for exhibition companies. Corresponding courses are added. It is particularly necessary, and it is inevitable to eliminate some courses that do not adapt to the development of the industry. Establishing a mechanism for dynamic adjustment of courses is particularly important for higher vocational exhibition education. To quickly integrate into the industry and quickly adapt to the position in the enterprise, not only a broad vision and skilled practical operation ability are required, but also a mastery of industry standards, familiarity with industry terminology, and the ability to ensure that the completed work complies with relevant industry laws and regulations.

2.2 Thoughts on Designing Curriculum System of Exhibition Planning and Management in Higher Vocational Colleges

The laws and regulations involved in the exhibition and the government departments that need to be reported, and the corresponding materials that need to be prepared, are all necessary conditions to ensure the smooth development of the event. The "five-in-one" core competence focuses on helping students majoring in convention and exhibition to improve their core literacy in an all-round way. Relying on the "five-in-one" core competence, the professional core curriculum system is constructed through reverse design. Based on market research analysis and position research analysis, according to the specific knowledge, ability and quality requirements of each position, combined with the corresponding professional qualification certificates, the exhibition is constructed from four aspects: exhibition planning, exhibition marketing, exhibition service management, and exhibition design. The professional course system of planning and management. At the same time, based on the systematized course system development model of the work process, the courses are reasonably sorted, and the setting relationship of the leading, follow-up and parallel courses is considered in the process of sorting, and the mutual integration between courses is paid attention to.

Professional core courses occupy a crucial position in the curriculum system, and their setting should be based on a large number of research, scientific analysis, and refine the core abilities or qualities required for future jobs, follow the rules of students' career development, from easy to difficult , from simple to complex, the core courses are set up with vocational ability training as the main focus, not only to realize the employment of students after graduation, but also to focus on the long-term career development of students in the future. The construction of training rooms related to VR equipment has become the direction of the construction of training rooms in undergraduate and vocational colleges. In the application of the training room after construction, there is no in-depth equipment application training, and there are no corresponding training resources. As a result, the application of exhibition professional teachers in teaching is still limited to the traditional video playback and the functionality of the PPT part. The proportion of actual application in teaching is very low, and the opening rate of virtual simulation training rooms in some colleges is lower than 50%, which cannot well support the transformation of teaching models.

First, construct the "five-in-one" core competence model. This study combines the content analysis method to explore the ability needs of exhibition-related enterprises on the current stage of exhibition talents and constructs a "five-in-one" core competence model, which is design ability, communication ability, sales ability, planning ability and project ability. Based on the recruitment texts of exhibition companies at this stage, combined with interview materials, the specific core competencies of the "five in one" major of exhibition planning and management are proposed, and then a core competency model is constructed.

Based on the systematized course system design model of the work process, and according to the requirements of the operation process of the exhibition industry for corresponding knowledge, the course system of the exhibition planning and management major in vocational colleges can be divided into vocational public courses, vocational basic courses, and vocational skills. There are five modules: vocational course, vocational operation course and vocational elective course. Among them, the course setting of vocational basic course, vocational skill course and vocational operation course should consider the courses of exhibition professional qualification certificate. The course objectives should be clearly defined. The curriculum standard stipulates the implementation of the curriculum, and in the actual implementation, or in the monitoring of the specific implementation of the curriculum, the curriculum teaching plan is undoubtedly one of the easier to operate and grasp, from which the arrangement of teaching content and the selection of teaching items can be controlled. To avoid duplication of project content, a teaching project resource library can be established to avoid duplication, and at the same time provide a content-rich platform for teachers to learn and communicate, improve the level of course teaching, and improve the quality of classroom teaching.

3. CONCLUSION

As a new major, the vocational exhibition major has a long way to go to optimize and innovate the curriculum system. Only according to the new development of my country's economy and technology, the new dynamics of industry and enterprises, employment-oriented, deep integration of schools and enterprises, and focus on the cultivation of the core competence of the exhibition profession, constantly optimize and innovate the curriculum system, and actively build core courses. The combination of function points should not be too much. So that students can easily master the platform application in teaching, and at the same time, they can well complete the practical training tasks of the corresponding modules, stimulate students' learning initiative, and guide students to subtly form professional ability.

4. REFERENCES

[1] Huang Zonglin. Research on Innovative Countermeasures of Practical Training and Teaching in Higher Vocational Exhibitions [J]. Writer's World, 2019(12):2.DOI:CNKI:SUN:ZJTD.0.2019-12-030.

[2] Chen Wei. Reflections on the USP Construction of Exhibition Planning and Management Majors in Higher Vocational Colleges [J]. Southern Vocational Education Journal, 2017, 7(1):6.DOI:10.3969/j.issn.2095-073X. 2017.01.007.

[3] Li Ling. Thoughts on Curriculum Design of Exhibition Planning and Management in Higher Vocational Colleges [J]. Journal of Sichuan Cadre Correspondence College, 2013(1):4.DOI:10.3969/j.issn.1008-8784.2013.01.026 .

[4] Xu Ming. Research on the training mode of exhibition professionals under the background of integration of production and education——Taking Beijing Foreign Trade School as an example [J]. Journal of Beijing Industrial Vocational and Technical College, 2022, 21(4):72-76.

[5] Xu Jing. The construction of the curriculum system of "dual-system integration, three-level progressive" for vocational exhibition majors [J]. Education and Occupation, 2014(17):2.DOI:CNKI:SUN:JYYZ.0.2014-17- 064.

[6] Xue Ying. Research on the Design and Implementation of Teaching Innovation of Exhibition Project Management Course [J]. Modern Commerce and Industry, 2018, 39(26):3.DOI:CNKI:SUN:XDSM.0.2018-26-073.

[7] Zang Xu. Research and Discussion on the Teaching System of Higher Vocational Exhibition English Courses [J]. Hua Zhang, 2014(16). DOI: 10.3969/j.issn.1009-5489.2014.16.172.

[8] Sun Danli. New Exploration Under New Opportunities—Practice Research on the Course System Construction of the Specialty of Exhibition Planning and Management in Sichuan Academy of Fine Arts [J]. Popular Literature and Art: Academic Edition, 2017(5):2.DOI:10.3969/ j.issn.1007-5828.2017.05.209.

[9] Yi Yue. Research on Project-based Teaching Reform of Higher Vocational Exhibition Professional Courses Based on School-Enterprise Cooperation [J]. Public Investment Guide, 2019(5):1.DOI:CNKI:SUN:DATZ.0.2019-05-201.

[10] Su Yuhui. Research on the Construction of the Modular Teaching Mode of "Exhibition Planning" Course in the Context of Industry-Education Integration——Taking Beihai Vocational College as an Example [J]. Teacher, 2021(29): 2.

[11] Rao Xuemei. Discussion on the Construction of Curriculum System for Higher Vocational Exhibition Management [J]. Tourism Journal, 2003(S1):3.DOI:CNKI:SUN:LYXK.0.2003-S1-023.

[12] Su Yuhui. The Innovation of the Practical Teaching Mode of the Exhibition Planning Major in Guangxi Higher Vocational Colleges from the Perspective of the Integration of Industry and Education——Taking the Exhibition Planning and Management Major of Beihai Vocational College as an Example [J]. Asia Pacific Education, 2020.DOI:10.12240/ j.issn.2095-9214.2020.18.072.

[13] Zheng Xiaoxing. Research on the Problems and Countermeasures of Virtual Simulation Technology in the Teaching of Higher Vocational Exhibition Professional Planning Courses [J]. Journal of Taiyuan City Vocational and Technical College, 2020(8):4.DOI:CNKI:SUN:CSZY.0.2020 -08-002.

[14] He Xinhong. Research on Reform and Innovation of Curriculum System of Landscape Architecture in Higher Vocational Education [J]. Talent, 2014(18):1.DOI:CNKI:SUN:CAIZ.0.2014-18-047.

[15] Zhang Jieli. The application of the "goal + practice + problem" ternary-oriented talent training model in higher vocational education——Taking exhibition planning and management as an example [J]. Asia Pacific Education, 2016(6): 2 .DOI:CNKI:SUN:YATA.0.2016-06-131.

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Research on Digital Application of Cultural Heritage Under the Background of AI

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Abstract: Intangible cultural heritage has very precious historical value, it represents the existence of a period of history, and it is worthy of our protection and study. Therefore, we should pay attention to the protection and utilization of intangible cultural heritage. This article will study the protection and utilization of intangible cultural heritage under the background of digitalization. Compared with the tangible cultural heritage with a certain form, the protection of intangible cultural heritage is more difficult. In addition, intangible cultural heritage is a non-renewable resource, which adds difficulty to the protection of intangible cultural heritage. In the context of digitalization, it provides a way for the protection and use of intangible cultural heritage. This article is to explore how to protect and utilize intangible cultural heritage under the background of digitalization.

Keywords: digital application, cultural heritage, AI

1. INTRODUCTION

With the continuous development of my country's economy, digital technology has gradually been widely used. We discuss the protection and utilization of intangible cultural heritage under the background of digitalization, and put forward some suggestions, hoping to better protect and inherit my country's excellent historical culture. The main method of intangible cultural heritage inheritance is "oral teaching", which means that the new inheritors are trained mainly through the oral teaching and precepts of the older generation to the next generation. However, the biggest problem brought about by this inheritance method is the shortage of inheritors. It is precisely because of this inheritance method that the inheritance of many intangible cultural heritage items is facing the threat of extinction.

In the context of economic globalization, the integration of Eastern and Western cultures, especially the introduction of Japanese and Korean cultures, has attracted the attention of many young people, who spend more energy on star chasing and fast-paced life. The fact that led to their interest in traditional culture. Coupled with the heavy burden of life, it is difficult to guarantee the quality of life if one lives purely on traditional skills.

The basis of the protection of intangible cultural heritage is to collect and preserve it. Due to the characteristics of intangible cultural heritage in various forms, intangible forms, and huge amount of information, it is difficult to collect, encode, and store intangible cultural heritage for a long time completely and effectively. Due to the rich and diverse forms of intangible cultural heritage and the huge amount of information, there are some problems in obtaining text, image, video and audio information through traditional graphic scanning, video recording, audio recording and other technologies. For example, in the collection and preservation of traditional dances in the above-mentioned methods, it is difficult to carry out accurate and comprehensive collection, let alone complete reproduction and modification.

For the protection of intangible cultural heritage, the most important point is to keep it original "taste". However, in the process of our country's continuous development, many intangible cultural heritage cultures in our country have suffered from the impact of many foreign cultures, and subtle changes have taken place in the impact. For those intangible cultural heritage cultures that have not been affected by foreign cultures, most Most of them are in rural areas, even in sparsely populated mountainous areas. Although they are not easy to be affected by outsiders, they are also little known, let alone protected.

For many intangible cultural heritage items, most of them exist in a certain family or in a certain small area. If people in this small group cannot correctly understand the intangible cultural heritage items, in view of the large number of intangible cultural heritage that needs to be protected, in the reality that it is impossible to fully realize digital protection in the short term, we can carry out protection in a planned way, distinguish which cultures are more eager to protect, and which cultures can be put behind, and highlight the key points for protection.

We can first focus on establishing a database of characteristic resources of local intangible cultural heritage to promote the protection and inheritance of characteristic resources of intangible cultural heritage in different regions, eras, and nationalities. First, it is necessary to do a good job in preliminary preparations, formulate practical plans, and avoid unnecessary troubles when carrying out formal work. Secondly, digital technology can be used to build an information sharing platform for intangible cultural heritage in the field of intangible cultural heritage, calling on the whole people to participate in it. The broad masses of the people can share and communicate their intangible cultural heritage through the cloud platform. And digital technology can count and analyze the information fed back by the people, screen out the items that meet the content of intangible cultural heritage, and carry out the entry of intangible cultural heritage.

2. THE PROPOSED METHODOLOGY

2.1 The advantages of protecting intangible cultural heritage under the background of AI digitalization

Finally, relevant technical personnel should combine intangible cultural heritage content and digital technology to develop a platform with simpler operation and more convenient search, to improve the operation efficiency of the people, so that they can understand more comprehensive information through the simplest operation method. Intangible cultural heritage information, to further deepen the people's understanding of intangible cultural heritage items. The development of civilization for thousands of years has made my country's intangible cultural heritage not only diverse, but

also distinctive. In the face of many intangible cultural heritages that need to be protected, relevant departments should realize the digital protection of intangible cultural heritage to the greatest extent according to the actual situation of different places. One of the most effective ways is to establish a database of digital resources of local characteristic intangible cultural heritage. To promote the protection and inheritance of intangible cultural heritage resources from different regions, times, and nationalities. One of the most effective measures based on digital technology is to establish a genetic information bank of intangible cultural heritage.

The collection and storage of intangible cultural heritage materials is the first prerequisite for the protection and utilization of intangible cultural heritage culture. As far as the intangible cultural heritage materials themselves are concerned, they are in various forms, coupled with the huge quantity, it is more difficult to collect and store them. In the context of digitalization, digital technology can be used to collect and store intangible cultural heritage materials, and it has good application effects. These effects have become even more pronounced in recent years with the rise and rapid development of digital technologies such as 3D scanning, motion capture and virtual reality. The digitization of intangible cultural heritage enables long-term preservation and makes management more convenient. In addition, storage under modern technology has also realized distributed, disk array storage, and with the development of retrieval technology and database technology, intangible cultural heritage data has become more structured, which is more beneficial to the sustainable development of intangible cultural heritage. We can first focus on establishing a database of local intangible cultural heritage characteristic resources to promote the protection and inheritance of intangible cultural heritage characteristic resources of different regions, different eras, and different nationalities.

We should do a good job of preparatory work, formulate feasible plans, and avoid unnecessary troubles in the process of formal work. Second, to carry out rigorous demonstration and research, the staff is required to analyze more accurate data through meticulous research. These data information include the preservation period, development area, and research background of many intangible cultural heritages. Third, we should be good at observing life, learn more from other people's successful experience, avoid roughness, and strive for excellence. The dissemination of intangible cultural heritage is one of the main purposes of protecting intangible cultural heritage, and the realization of this purpose must rely on certain means of communication. The existence of the digital background provides a powerful communication tool for the purpose of communication, and the most widely used one is new media technology.

2.2 Using digital technology to enhance the dissemination of intangible culture

With the support of new media technology, and then use TV, websites, the Internet, etc. to promote, so that most users can accurately understand the information of intangible cultural heritage. For example, the broadcast of the program "Chinese Riddle Conference" has made everyone understand the folk custom of guessing riddles better. The expression and dissemination of culture must rely on certain tools and carriers, and the emergence of modern digital technology provides more means and methods for the dissemination of intangible culture. Among them, new media is the most important and widely used tool. New media refers to the information carrier that records, processes, disseminates, and acquires in the form of binary numbers. The development of modern new media communication technology has created new conditions for the dissemination of intangible cultural heritage.

The application of new media is mainly to make full use of advanced technologies such as images, audio, video, geographic information systems, and 3D animations to digitize intangible cultural heritage, make full use of the characteristics and advantages of digital media, build interactive and three-dimensional communication channels, and reuse platforms such as digital TV, websites, and mobile Internet realize the interactive dissemination of intangible cultural heritage, and at the same time present the intangible cultural heritage in front of the people in an all-round way, so that the precious cultural heritage of mankind can be learned, researched and inherited on a larger scale. Faced with so many intangible cultural heritages that need to be protected, we must first selectively focus on protection to prevent the loss of intangible cultural heritage, which is conducive to stopping the loss in time.

Secondly, classify, scientifically demonstrate, and refine my country's rich and colorful intangible cultural heritage. In this way, the core elements of cultural heritage genetic information can be permanently inherited and adhered to, and the geographical attributes, era characteristics, spiritual connotations, value systems, discourse systems, etc. of cultural heritage can be scientifically and objectively evaluated and classified. Inheritance of heritage is of great significance. Finally, use your own professionalism and advanced technologies you are familiar with to promote the protection and utilization of intangible cultural heritage. my country's civilization has developed for thousands of years, and its manifestations are naturally more colorful.

In the digital age, to protect and utilize intangible cultural heritage in a true sense, in addition to protecting and utilizing individual intangible cultural heritage items, it is also necessary to establish a unique resource library. Realize the maximum protection and utilization of intangible cultural heritage and promote its sustainable development. First, refine the core elements of intangible cultural heritage items, find out information that can be passed on permanently, and complete analysis and demonstration to ensure the accuracy of intangible cultural heritage inheritance. Second, give full play to the functions of digital technologies such as artificial intelligence and pattern recognition, and use them to collect and identify information characteristics of intangible cultural heritage in terms of color, texture, and graphic symbols in a timely and effective manner.

3. CONCLUSION

In the context of the rapid development of contemporary digital technology, the pace of life is accelerating, and the pressure of life is increasing. While people are constantly working hard to cope with life, they must not forget to inherit and learn history and culture and pay special attention to the protection and inheritance of my country's intangible cultural heritage. We should make full use of modern resources, protect, and inherit our country's intangible cultural heritage with the help of advanced digital cultural technology, and make corresponding efforts for our country's cultural construction. Relevant departments should make full use of digital technology to realize the collection and storage of intangible culture, and use virtual museums, new media and other forms supported by digital technology to realize the

efficient use of intangible cultural heritage, to realize the prosperity and development of Chinese culture.

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5. REFERENCES

[1] Wang Jue. The Advanced Way of Digital Communication of Intangible Cultural Heritage under the Background of Artificial Intelligence [J]. Huaxi: Literature and Art Education, 2020, 000(017):P.1-1.

[2] Yu Feiyang. Research on Metadata Application in Intangible Cultural Heritage [D]. Hubei Academy of Fine Arts [2023-06-15]. DOI:CNKI:CDMD:2.1017.265784.

[3] Tang Yuanchao, Jiang Dongsheng. Research on the Digital Protection of Intangible Cultural Heritage of Minority Sports in my country[J].[2023-06-15].

[4] Tang Xiaoying, Ou Xuelan, Xie Danni. Design Application and Research of Cantonese Furniture "Paper Museum" Based on AR Technology [J]. Packaging Engineering, 2018, 39(4):8.DOI:10.19554/j.cnki .1001-3563.2018.04.022.

[5] Huang Yi. Analysis on the Protection and Utilization of Intangible Cultural Heritage under the Background of Digitalization [J]. 2021.DOI:10.12228/j.issn.1005-5312.2021.15.133.

[6] Zhu Guangli, Li Xi, Zhang Wenpeng, et al. A museum digital media art innovation platform for intangible cultural heritage: 202110590766[P][2023-06-15].

[7] Zhou Qiong. Protection and Utilization of Intangible Cultural Heritage under the Background of Digitalization [J].[2023-06-15].

[8] Zhou Mingquan. Research on Digital Protection of Cultural Heritage [M]. Beijing Normal University Press, 2006.

[9] Jia Jing. The advanced direction of digital communication of intangible cultural heritage under the background of artificial intelligence [J]. Contemporary Communication, 2020(1):4.DOI:CNKI:SUN:DACB.0.2020-01-033.

[10] Zhu Yu. Research on the advanced direction of digital communication of intangible cultural heritage under the background of artificial intelligence [J].[2023-06-15].

[11] Deng Lingli. Protection and Utilization of Intangible Cultural Heritage under the Digital Background [J]. Shenzhou, 2019(16): 2.

[12] Liu, Zhengai, Liu, Zhengai. Protection of Intangible Cultural Heritage and Inheritance of Folk Culture: A Case Study of Burning Incense in Kuandian [J]. Senri Ethnological Studies, 2014, 90:133-168.

[13] Qi Aimin. On Intangible Cultural Heritage and Its Protection under the Framework of Intellectual Property Rights [J]. Journal of Chongqing University (Social Science Edition), 2007.

[14] Liu, Zheng Ai, Liu, Zhengai. Intangible Cultural Heritage Protection and Folk Culture Inheritance——Taking Kuandian Burning Incense as an Example[M]. Social Science Literature Publishing House, 2013.

[15] Qu Aixue, Xia Guixiang, Ji Man, etc. Cultural Protection and Inheritance and Utilization of Taierzhuang Ancient City[J].[2023-06-15].

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Design of an Open Network Community Platform for Chinese Excellent Traditional Culture Education Based on Object Pascal

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Abstract:Integrate Chinese excellent traditional culture into the construction of campus culture, so that students can regularly accept the edification of Chinese excellent traditional culture; attach importance to the construction of practice bases and platforms, and enhance students' understanding and recognition of Chinese excellent traditional culture through practical activities; use modern information technology to create Network platform and interactive community. To clarify the important role of the Internet era in the innovation of Chinese traditional culture teaching mode, to make the connection between Chinese traditional culture and the Internet more closely, and to make excellent traditional culture a spiritual force that inspires people to move forward in the new era. In the proposition of building a traditional culture inheritance system, we use community education as a carrier to explore the way of popularizing traditional culture education suitable for community residents.

Keywords: Open Network Community, Chinese Excellent Traditional Culture, Culture Education, Object Pascal Online System

1. INTRODUCTION

This article will introduce ObjectPascal's support for object-oriented functions, and the differences between ObjectPascal and C++ in implementing object-oriented features [1]. Hope this article can help programmers who use C and C++ to clarify many concepts in the process of learning ObjectPascal. In the development process of Delpih application, sometimes it is necessary to perform subtraction operation on date type data [2].

As shown in Figure 1, in order to calculate the number of days between two dates, you need to write the following code in the OnlCick event of the "Subtract" button [3]. The excellent traditional Chinese culture is the crystallization of the wisdom of the Chinese nation for thousands of years, and it is our nation's root and soul [4]. Contemporary college students are the main force in the construction of socialism with Chinese characteristics in the new era, and it is an important historical task for colleges and universities to educate them on the excellent traditional Chinese culture in the new era [5].

Looking for designs with Chinese flavors requires us to introduce traditional Chinese culture in the teaching process, so that students can use traditional design elements as their own design language in the edification of China's excellent traditional culture, and complete more strong Chinese flavors. "Chinese Design" [6]. As an important organizational form of traditional Chinese education, the academy is the carrier of the inheritance of Chinese culture. Community academies are a modern transformation of traditional academies [7]. Community academies take the community as the basic unit and the academy as the form of education and dissemination to build a basic network for the promotion of traditional culture and humanistic education. "The Fifth Session of the Seventeenth Central Committee of the Communist Party of China is generally accepted by all academic circles [8].

The existentialist philosopher Jaspers said: "Culture is the spirit and soul of a nation, and is a form of life; its backbone is a powerful force for spiritual exercise, national development and national rejuvenation," said the meeting bulletin [9]. "China's excellent traditional culture is the precious wealth of Chinese civilization and the spiritual wealth of the world. In the age when the Internet has not been popularized, museums and other institutions in various regions undertake the task of inheriting traditional culture [10].

As a secondary vocational school, it is necessary to adapt to this new normal, strengthen new determination, seize opportunities, extend school education to the community [11], make full use of the community's wide-ranging and educational platform, inherit and carry forward the excellent traditional Chinese culture, Improve the ideological and moral quality of the whole people [12]. But using other programming languages (such as Xbase, VB, etc.), you can also understand the object-oriented functions of ObjectPascal, and establish a good foundation in the beginning of learning Delphi. Click the Run button on the toolbar or press the 9F key to run the entire program (see Figure 7), click the OK button with the mouse, and the form is closed, indicating that the application is working correctly [13].

Continuously strengthen the construction of curriculum system, campus culture, practice platform and network platform, build a "four-in-one" all-round and multi-level three-dimensional classroom, and promote the in-depth development of Chinese excellent traditional culture education [14]. Art and design majors have higher requirements for students' innovative ability, so generative creative interpretation is required in the teaching of art and design theory [15]. In this way, students can feel the cultural situation in the field of artistic creation, improve the traditional rigid teaching mode, and build a social popularization platform that is closer to the public. Banyan Community College takes life education as the core idea and promotes the inheritance of traditional Chinese culture and the implementation of humanistic education in real life [16].

"The ability to prosper and develop cultural thinking; its domain is well-ordered knowledge." Culture is a cause and a

cultural industry." ". It can be said that the concept of cultural industry is in the "Eleventh Five-Year" planning method [17], the way of communication and the way of thinking of people. At present, many people spread and promote traditional culture on the Internet platform, and traditional culture teaching has received attention and attention [18].

When teachers teach traditional culture, on the basis of Internet teaching, the content of traditional knowledge and the background of the current era are integrated. General Secretary Xi Jinping has repeatedly emphasized the need to inherit and carry forward the excellent traditional Chinese culture. The reason why the Chinese nation has stood in the forest of nations in the world for thousands of years, has gone through hardships and nirvana again and again, is the most fundamental reason for the great spiritual support and lofty value pursuit deeply rooted in the nation's genes [19].

2. THE PROPOSED METHODOLOGY

2.1 The Object Pascal

Although the form file (.difll) is an H binary file, its eTxt form can be viewed in the form designer. For example, you can return to the Delpih 17 design window, right-click, and select "iVewaseTxt", you can see all the definitions of this window, which is a good way to study and design the Delpih interface. This is declared in the interface The categories, procedures, functions and variables in the program module, and the categories, procedures and functions declared in the interface part are really completed in the implementation part; as for C and C++, the implementation of the categories is basically placed in another CCP in the documentation.

Due to the lack of systematic study, contemporary college students lack an overall understanding of Chinese excellent traditional culture, and a considerable number of college students have an extremely lack of awareness of Chinese excellent traditional culture. In C and C++, objects can be built on the stack or heap, for example, in a program (see Program 1), two objects can be created in function foo, one from the stack and the other from the heap.

Instead, it also contains iT two information. The reason is that when the Date value contains iTme information, the difference is 3 hours, and when converted into days, it is 3/24 to 0.125; we repeatedly test the value of the piece by setting different time differences, and the results show that the presumption is correct .In order for college students in the new era to fully and systematically understand the excellent traditional Chinese culture, courses must be carefully designed and planned. First of all, the teaching content should focus on the achievements of Chinese civilization and the concept of Chinese culture.

The advantage of using Object Pascal object reference is that you can use this reference as a real object, such as MyObject in program 2, when you want to access its methods. The array used by TuhroPascal language is static, that is, the user When defining the array structure, the total number of elements of the array must be specified, and the dynamic array length in objectaPscal is set at runtime by calling the eStLenght function. However, there is an exception to the Object Pasacal object generation model, which is in the When a form (Form) is created in DelphiDE and VCL components are added to this form, Delphi will generate program code such as program 4 in the program.

2.2 The Open Chinese Excellent Traditional Culture Education

After more than 5,000 years of development, the Chinese nation has accumulated fruitful results in the construction of material civilization and spiritual civilization. In order for students to understand the main content of Chinese excellent traditional culture within limited class hours, they must carefully select the teaching content. Focus on the most representative achievements and concepts.

Art and design teaching itself is a kind of flexible teaching content, so in classroom teaching, it is also necessary to be able to break the traditional boring and monotonous teaching mode, adopt text-based teaching, to the art salon form of artistic quality can improve the humanistic quality of students. The twenty-four solar terms are the crystallization of the wisdom of the Chinese nation. Every solar term, the Benyuan Community College will gather community neighbors in the form of tea parties, enjoy tea around the fireplace, explore the source culture, accompanied by qin songs and poems, examines one's own life modality, and advocates a lifestyle of "in harmony with the four seasons".

Community "cultural old-age care" is a kind of old-age care method that reflects the connotation of traditional Chinese culture and old problems injected into culture, which can not only improve the quality of old-age care and contemporary humanistic care. In order to meet the security requirements of the elderly, it can enrich and develop the theory of old-age care. On the basis of the old, the emphasis is on the pursuit of spiritual life satisfaction. Some teachers are preparing lessons for traditional culture teaching. Mainly implement lesson preparation and classroom teaching according to the content of teaching materials, teaching reference books or network materials, etc., and fully display them in the form of text and pictures on the basis of PPr form. In most cases, in this process, traditional Chinese cultural knowledge and information are displayed statically. The contents are effectively integrated.

The ideas of "harmony", "benevolence", "integrity" and "the world is for the public" in Chinese traditional culture have become the content of the core socialist values, mainly because they not only meet the objective requirements of Chinese social development, but also reflect people's universal wishes and basic demands. "A culture or civilization, in its broad ethnological sense, is a complex set of knowledge, beliefs, arts, morals, laws, customs, and any of the abilities and habits that a person acquires as a member of society," he said. overall.

2.3 The Design Of Traditional Culture Education Network Community Platform

The Chinese nation will also be able to create new splendor of Chinese culture". Thirdly, the education of excellent traditional Chinese culture should reflect the global vision and the world vision. The development of Chinese culture should be included in the historical process of human civilization for investigation, and through and at the same time Comparing the development of other civilizations, let students understand the dynamic orientation of Chinese culture in the process of world civilization. In the teaching of art and design majors, it is necessary to effectively combine theory and practice, use theory to provide guidance for practice, and return the gains from practice. Theoretically, this is also a cyclical development path.

As a modern public welfare organization, Benyuan Community College has been practicing the pure public welfare and chain operation mechanism with the form, system and method of modern social organization based on the concept of "inheriting culture with public welfare and building public welfare with culture" since its establishment. , to implement the project system of "foundation + NGO (non-governmental public welfare organization)", two-layered differentiated management: Benyuan Humanities Public Welfare Foundation as a resource support platform. Tools such as Android and tablet computers are widely used, and smart phones are widely used. The number of mobile tools in the hands of students has been increased. On the basis of applying new technologies to assist teaching, school teachers can effectively highlight the interesting and intellectual characteristics of learning. It has an important impact on the improvement of students' interest in learning.

The school incorporates traditional culture education into the scope of teaching work, establishes a team of teachers who are competent for teaching work, and has accumulated a lot of useful teaching experience and remarkable successful practices in teaching practice, which undoubtedly provides excellent traditional culture training for community organizations. The job provides a teacher guarantee. But in the ObjectPascal of program 6, when Mychild is created, not only its constructor must be called, but also its parent constructor must be called in Mychild's constructor. All components of Deloi include a Tag property, its function is to store a user-defined long integer value for the component. In the actual programming process, the user sets different Tag attributes for the same type of component. Set up research centers and research bases to systematically organize traditional cultural resources in the region, and compile teaching materials with local characteristics on this basis. Thirdly, we should strengthen the development of Chinese excellent traditional culture education courses and speed up the construction and promotion of high-quality courses.

3. CONCLUSIONS

The Chinese excellent traditional culture education in colleges and universities is a complex systematic project. The construction of a "four-in-one" three-dimensional classroom can realize the interconnection of theoretical learning and social practice, the effective integration of on-campus resources and off-campus resources, and the mutual interaction between offline education and online education. At the same time, based on APP assisting traditional teaching and traditional culture teaching webpage design, the learning methods of students' traditional cultural knowledge content are expanded. The construction of traditional culture teaching mode in higher vocational colleges requires a long process of exploration. Try to find a model that higher vocational students like to see and are willing to participate in.

4. REFERENCES

[1]Bao Jigang, Xi Jianchao, Shen Shiwei, et al. Comparison of Transformation and Internationalization of Chinese Tourism Geography Research [J]. China Ecotourism, 2021, 11(1): 11-26.

[2]INDICATORS A E. Economic[J]. BALANCE SHEET, 2003, 2004: 2004.

[3][1] Zhang Rui. On the Inheritance and Development of Rural Excellent Traditional Culture [J]. Journal of Sanmenxia Vocational and Technical College, 2012(01):91-93.

[4] Ye Huogui, Ye Liying. Talking about the characteristics, development trend and work ideas of rural harmonious mass culture [J]. Journal of Shangrao Normal University. 2008(02): 32-39.

[5] Zhu Huijuan. An Analysis of the Ways of Inheriting Excellent Folk Traditional Culture in the Construction of New Rural Culture [J]. Journal of Xichang University (Social Science Edition), 2011(06): 133-136.

[6] Qian Jing, Ma Junzhe. A review of the research on the culture of sages in Xinxiang in China [J]. Journal of Beijing Agricultural Vocational College, 2016(04): 51-55.

[7] Li Mei, Miao Runlian. Development characteristics and suggestions of three different types of ecological civilization villages in Beijing mountainous area [J]. Tianjin Agricultural Science, 2013(06): 15-18.

[8] Zhu Yuelong . Research on the Development Model of Ecological Rural Areas in the Plains of Beijing Suburbs [D]. Beijing: China Agricultural University, 2005: 57-64.

[9] Zhao Lan. Protecting the Excellent Traditional Rural Culture and Promoting the Construction of "Rural Culture" [J]. Rural Economy, 2010(02): 122-124.

[10] Zhao Lan. Rural Culture: Deconstruction and Sublation [J]. Chinese Culture Forum, 2010(01):112-116.

[11] Zhu Huijuan. An Analysis of the Ways of Inheriting Excellent Folk Traditional Culture in the Construction of New Countryside Culture [J]. Journal of Xichang University (Social Science Edition), 2011(02):133-136.

[12] Xing Hailing. An Analysis of the Inheritance Path of Folk Art in the Construction of New Countryside Culture [J]. Journal of Zhengzhou University (Philosophy and Social Sciences Edition), 2011(04):152- 155.

[13] Wang Hao, Xu Jingyun . Guo Jinlong emphasized during his research in Miyun District: Explore the development path of ecological civilization construction, so that farmers in suburban Beijing can sustainably increase their income and become rich [N]. Beijing Daily, 2016-09-23(001).

[14]General Office of the Central Committee of the Communist Party of China, General Office of the State Council. Opinions on Implementing the Project of Inheriting and Developing Chinese Excellent Traditional Culture [EB/OL]. (2017-01-25). http://www.gov.cn/zhengce/2017-01/25/content_5163472.htm.

[15] Lu Feifei, Du Ruiping. The Value and Realization Ways of Traditional Culture Education in Ideological and Political Education in Colleges and Universities [J]. Education Theory and Practice, 2011(5): 38-40.

[16] Zhao Kangtai, Li Yinghua. History of Chinese Traditional Ideological and Political Education Theory [M]. Wuhan: Central China Normal University Press, 2006: 1-5.

[17] Qu Jiangbin, Zhang Wei. The value and application of traditional culture in the ideological and political education of college students [J]. Student Party Building and Ideological Education, 2012(1): 68-69.

[18] Li Quanshi, Li Minghua, Han Qiang. Lingnan Culture [M]. Guangzhou: Guangdong People's Publishing House, 2010.

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Research and Development of a Land Resource Management Information System Based on Multi-Dimensional Information Fusion

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Abstract:Research and development of a land resource management information system based on the multi-dimensional information fusion is studied in the manuscript. Information fusion as a multi-layered, multi-faceted, and multi-level process that involves the detection, correlation, combination, and estimation of data from multiple sources. In this study, the fusion model is integrated to make the land resource management information system efficient. Information resource management needs not only hard information technology as a theoretical support, but also soft management methods as a means. The application is defined and studied for improving the efficiency.

Keywords: Information fusion, multi-dimensional data, land resource management, information system

1. INTRODUCTION

The management of information resources begins at birth. It is inseparable from the management information system. Many researchers believe that one of the reasons for the emergence of information resource management is that due to the high failure rate of early information systems, purely technical management can not solve problems of information systems.

Therefore, people turn to resource management models to manage and control information system. Urban management and planning involve many elements and complex matters, which include not only the spatial information data of the spatial location of geographic objects, but also attribute data reflecting some other characteristic information of geographic objects. Therefore, the construction of such a large and also sophisticated system is particularly complicated. Existing attempts to build the webGIS-based soil resource information system organically combine soil resource information with geographic information systems, build a large spatial attribute database, and use computers to query, retrieve and count soil resource information with geographic characteristics and the operations such as soil characteristics analysis and suitability evaluation. According to the related studies, the applications can be understood from following aspects:

(1) Application in the disaster monitoring. The geographic information system can be used to then manage, query, and analyze information, determine the scope of the disaster, and determine the best route for the distribution of disaster relief materials so that victims and property can be safely and also effectively transported.

(2) Urban road traffic. Three-dimensional spatial geographic information, which enriches the means of solving traffic jams, can be obtained with the established system.

(3) Based on the division of water body functional zones and the analysis of the water environment status quo, such as the water quality target of the river section, the total amount of pollutant discharge and control, combined with the economic development situation, the pollution load of each level year is predicted, and the constraints such as the operation and also regulation of the reservoir, the water level and flow of the river are well considered, and the numerical value is used. Simulation means to evaluate the water environment.

(4) Dynamic monitoring of the water resources, or tracking monitoring, is mainly used for malicious water resources incidents, illegal groundwater extraction, overexploitation, substandard sewage discharge, sudden pollutant leakage, and so on, to predict, analyze and evaluate the consequences of water resources incidents, and provide scientific basis for event management.

In the Figure 1, the sample is presented and then in the next sections, the details will be discussed in detail.

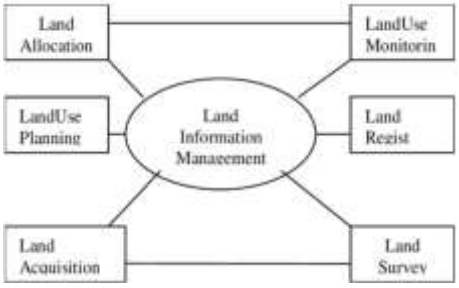

Figure. 1 The Land Information Management Nexus (Figure from: https://www.researchgate.net/figure/The-Land-Information-Management-Nexus_fig1_325455145)

2. THE PROPOSED METHODOLOGY

2.1 The Development of a Land Resource Management Information System

As an important technical support of modern geography, GIS has strong functions of the data acquisition, access, and processing. The integration function of the GIS will play an increasingly important role in resource information systems. The emergence of information resource management stems from rapid increase of information and the rapid development of information technology; while formation of management information system is the application and development of the information technology in the general organizational business management. Therefore, the emergence and development of the information technology is the common basis of the two disciplines. From the perspective of the information resource

management, information resource management is a management theory and method based on the information technology. Since birth of information resource management, the use of information technology for the development and construction of information systems has been one of its essential characteristics.

Information resource management needs not only hard information technology as a theoretical support, but also soft management methods as a means. In the current environment of the rapid development and popularization of information technology. Compared with other management methods, we have many incomparable advantages by building a city management information system, such as: it can prepare and provide information in a unified format, and simplify various statistical tasks. Reduce information costs; provide timely and comprehensive information with different requirements and different levels of detail. To quickly analyze and explain phenomena, and produce comprehensive control in time; it can comprehensively and systematically store a large amount of information, and can quickly query and synthesize. For the design of the system, we should consider listed aspects:

(1) Use consistent map tiles, map projections, geographic coordinates, scales, norms, standards, encoding and data formats, metadata standards, and normalized underlying geodatabases in system design.

(2) Guarantee the data stability, security, error detection and correction capabilities of the system.

(3) Make full use of the resources and technical advantages of the integrated environment, such as multi-source information integration technology, multi-language integrated compilation technology, multi-system function integration technology, multi-platform system integration technology, and distributed application integration technology in the network environment.

In a multi-user system environment, the system architecture plays a key role in data sharing, concurrency, and consistency. From a design perspective, the current architecture design can be summarized as "server-centric" and "client-centric". In our designed system, this will be considered as the framework.

2.2 The Integration of the Multi-dimensional Information Fusion

Information fusion is the process of processing information from multiple sources at multiple levels, each with a different level of information abstraction; information fusion includes detection, association, correlation, estimation, and also the combination of the information. Information fusion research originated from sonar information fusion research in the 1870s. Later, it was extensively studied in the military field and played an important role in the military C3I systems of the various developed countries. With the increase of research and application, its research and application have already expanded to various fields, such as traffic control, medical diagnosis, robot navigation, security control, and other fields.

The key to information fusion is to correlate information data from multiple sources and then use appropriate methods to seamlessly integrate the data in each cluster. The multi-source information fusion technology we use is a computer technology that automatically analyzes and synthesizes information observed by multiple sensors from different information sources according to certain criteria to obtain information that no single source can provide. Information processing technology that synthesizes valuable information and ultimately accomplishes its ultimate mission.

3. CONCLUSION

Research and development of a land resource management information system based on multi-dimensional information fusion is studied in the manuscript. The model design of information fusion system is the key issue of information fusion, which has direct impact on the structure, performance and system complexity of the fusion algorithm. This paper gives the combination of the technologies to construct the efficient resource management information system. In the future study, the different applications will be considered.

4. REFERENCES

[1] Alam, Akhtar, M. Sultan Bhat, and M. Maheen. "Using Landsat satellite data for assessing the land use and land cover change in Kashmir valley." GeoJournal 85 (2020): 1529-1543.

[2] Zurqani, Hamdi A., and Khaled R. Ben Mahmoud. "Land cover, land use, and vegetation distribution." The Soils of Libya (2021): 77-89.

[3] Abdulrahman, Ashti I., and Shamal A. Ameen. "Predicting Land use and land cover spatiotemporal changes utilizing CA-Markov model in Duhok district between 1999 and 2033." Academic Journal of Nawroz University 9, no. 4 (2020): 71-80.

[4] Gong, Peng, Bin Chen, Xuecao Li, Han Liu, Jie Wang, Yuqi Bai, Jingming Chen et al. "Mapping essential urban land use categories in China (EULUC-China): Preliminary results for 2018." Science Bulletin 65, no. 3 (2020): 182-187.

[5] Gheitury, M., M. Heshmati, and M. Ahmadi. "Longterm land use change detection in Mahidasht watershed, Iran." Ecopersia 7, no. 3 (2019): 141-148.

[6] Ren, Yanjiao, Yihe Lü, Alexis Comber, Bojie Fu, Paul Harris, and Lianhai Wu. "Spatially explicit simulation of land use/land cover changes: Current coverage and future prospects." Earth-Science Reviews 190 (2019): 398-415.

[7] Chen, Chi, Taejin Park, Xuhui Wang, Shilong Piao, Baodong Xu, Rajiv K. Chaturvedi, Richard Fuchs et al. "China and India lead in greening of the world through land-use management." Nature sustainability 2, no. 2 (2019): 122-129.

[8] Abdullah, Abu Yousuf Md, Arif Masrur, Mohammed Sarfaraz Gani Adnan, Md Abdullah Al Baky, Quazi K. Hassan, and Ashraf Dewan. "Spatio-temporal patterns of land use/land cover change in the heterogeneous coastal region of Bangladesh between 1990 and 2017." Remote Sensing 11, no. 7 (2019): 790.

[9] Shu, Xiao, Weibo Wang, Mingyong Zhu, Jilei Xu, Xiang Tan, and Quanfa Zhang. "Impacts of land use and landscape pattern on water quality at multiple spatial scales in a subtropical large river." Ecohydrology 15, no. 3 (2022): e2398.

[10] Camara, Moriken, Nor Rohaizah Jamil, and Ahmad Fikri Bin Abdullah. "Impact of land uses on water quality in Malaysia: a review." Ecological Processes 8, no. 1 (2019): 1-10.

[11] Rahaman, Muhammad Mizanur, and M. Kamruzzaman Shehab. "Water consumption, land use and production

patterns of rice, wheat and potato in South Asia during 1988–2012." Sustainable Water Resources Management 5, no. 4 (2019): 1677-1694.

[12] Cai, Enxiang, Weiqiang Chen, Hejie Wei, Jiwei Li, Hua Wang, Yulong Guo, and Xinwei Feng. "The coupling characteristics of population and residential land in rural areas of China and its implications for sustainable land use." Sustainable Development 28, no. 4 (2020): 646-656.

[13] Velazco, Santiago José Elías, Fabricio Villalobos, Franklin Galvão, and Paulo De Marco Júnior. "A dark scenario for Cerrado plant species: Effects of future climate, land use and protected areas ineffectiveness." Diversity and Distributions 25, no. 4 (2019): 660-673.

[14] Liang, Xun, Qingfeng Guan, Keith C. Clarke, Shishi Liu, Bingyu Wang, and Yao Yao. "Understanding the drivers of sustainable land expansion using a patch-generating land use simulation (PLUS) model: A case study in Wuhan, China." Computers, Environment and Urban Systems 85 (2021): 101569.

[15] Farzinmoghadam, Mohamad, Nariman Mostafavi, Elisabeth Hamin Infield, and Simi Hoque. "Developing an automated method for the application of lidar in iumat land-use model: Analysis of land-use changes using building-form parameterization, GIS, and artificial neural networks." Journal of Green Building 14, no. 1 (2019): 1-30..

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Theoretical Research on the Management of College Students from the Perspective of New Public Management Theory

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Abstract:Theoretical research on the management of the college students from the perspective of new public management theory is studied in this paper. Students are the main force of social development. They are the successors to the vigorous development of the Party and the country. Therefore, college students should develop good study and living habits, lay a good foundation for the future development of students, and make the main goals of our higher education and historical responsibility. New public management, as a new management model, is the result of the interaction between the theoretical crisis and the reality of the traditional administrative management model. In the process of the policy formulation and implementation, this paper proposes t he novel suggestions for the efficient guiding and the suggestions are provided.

Keywords: New public management theory; theoretical research; college students; general management

1. INTRODUCTION

School management is a serious and meticulous work, which can pay attention to and correct the behavior of the students, influence and guide the future of students. At the current stage, big data has played an important role in the process of the informatization construction of college student management. Teachers of college student management should be good at the analysis of various kinds of data, make full use of big data, properly standardize the amount of the data processing, and promote the diversification and innovation of information processing in the era of big data.

From the recent studies, the student management can be understoond from the following aspects.

(1) Simply put, the setting and development of student management goals should focus on the management goals of the school system. This also means that there is a very close relationship between collective goals and individual goals. While achieving mutual cooperation, it is necessary to strengthen management coordination and intervention, and promote collective and also the harmonious cooperation. The realization of individual goals will improve the level and quality of college student management.

(2) In the actual process of the informatization construction, traditional management concepts should be changed, and product design and development should be carried out from the perspective of the actual needs of students. This will ensure a high degree of fit between the core functions of the product and the actual needs of students, so as to improve system utilization.

(3) We must follow the principle of the "student-centered" management. All management behaviors and management concepts should follow the actual needs of students. We should not only pay attention to students' daily learning, but also pay attention to students' living conditions, and make full use of the powerful analytical capabilities of big data, in-depth analysis and researching the inner demands and voices of the students.

In the following section, the details will be discussed and to begin with, the Figure 1 shows the students' time arrangement statistics.

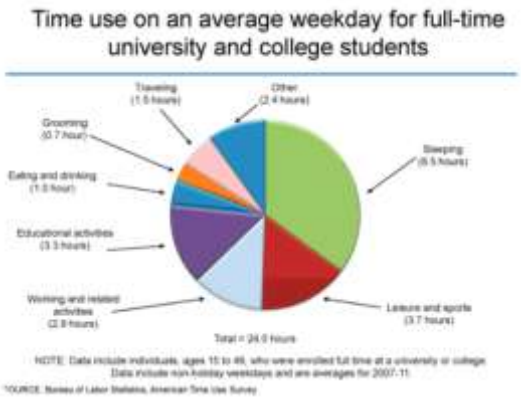

Figure. 1 The Students' Time Arrangement Statistics (Figure from: https://www.pinterest.com/pin/time-management--281543699422941/)

2. THE PROPOSED METHODOLOGY

2.1 The New Public Management Theory

New public management, as a new management model, is the result of the interaction between the theoretical crisis and the reality of the traditional administrative management model. In the process of the policy formulation and implementation, the new public management theory adopts a rational approach to emphasize the role of strategic management in government operations.

It further reorganizes organizational design, divides policy formulation and also management operations, and establishes responsible administrative units to provide services. As the main idea of strengthening management, the way and method of new public management emphasizes flexibility and strengthening cooperation and mutual benefit among various departments. At the same time, emphasizing the specialization of management, employing professional managers can make

management more scientific; emphasizing the transformation of the relationship between the manager, the managed and the management field, that is, the management of the public sector must handle the relationship between the manager and the managed. It is also necessary to handle the relationship between the internal departments of the manager.

Then, we should refer the following aspects:

(1) The traditional government management environment is accustomed to relying on the existing rules and regulations. Government leaders and cadres control subordinates superficially and do not pay attention to results. The standard for evaluation of the employees is their compliance with the current rules and regulations, not their service to the government and the people.

(2) Realizing the transformation of the government from administration to service, improving the administrative efficiency and quality of government, making the government system more flexible, and generating better economic and social benefits in serving the public are the basic concepts of the new public management function.

(3) New public management should be "people-oriented", emphasizing the core position of natural persons, respecting and meeting the demands of the public, and striving to provide them with excellent services.

2.2 The Several Suggestions for Management of College Students

The basic responsibility of the colleges and universities is to provide certain training for the professional skills of college students, to cultivate the social skills of college students for the entry into society in the future, so that college students can make certain contributions to society and others through their own abilities. Hence, we provide the following suggestions:

(1) In the actual student management work, relevant personnel can also use the campus internal network to conduct real-time tracking and communication, grasp the latest ideological and behavioral trends of the students, ensure that hot issues in the school can be effectively paid attention to, and guide public opinion on emergencies and public opinion control, so as to ensure the stability of the internal environment of the school.

(2) Colleges and universities should carefully analyze and accurately grasp the current situation of each student, and compare with the overall goals set by the school to clarify the gap between the actual situation of students and the target requirements, find out the reasons, formulate countermeasures, and point out the direction for the students to optimize and achieve personal management goals.

(3) In practice, colleges and universities can scientifically formulate student management goals according to their own talent training plans and specific implementation conditions, so as to achieve the goals of optimizing school spirit and style of study, maintaining good campus order, and improving school quality.

3. CONCLUSION

Theoretical research on the management of college students from the perspective of new public management theory is studied in this paper. Student management work has a profound impact on college education and student development, and is related to whether the goal of educating people in the colleges and universities can be successfully achieved. Therefore, colleges and universities should integrate goal management into the management of college students, and through the formulation of realistic management goals. In this paper, the new ideas are provided and in the future, we will apply this into the real scenarios.

4. REFERENCES

[1] Li, Deming. "Analysis of the challenges and countermeasures of college student management in the age of big data." In 2020 4th International Conference on Economics, Management Engineering and Education Technology (ICEMEET 2020), pp. 502-505. 2020.

[2] Lyu, Zenghui, Yuanyuan Hou, and Youwei Wang. "Research on the current situation of college students' physical health under the background of the integration of sports and medicine." Journal of Healthcare Engineering 2022 (2022).

[3] Bautista, Perla R. "Level of awareness and practices on solid waste management (SWM) among college students." Journal of Biodiversity and Environmental Sciences 14, no. 1 (2019): 131-138.

[4] Kim, Sujin, Donghee Sinn, and Sue Yeon Syn. "Personal health information management by college students: patterns of inaction." Information Research 25, no. 1 (2020).

[5] Chen, Peng Sheng, Jing Li, and Seung-Yong Kim. "Structural relationship among mobile phone dependence, self-efficacy, time management disposition, and academic procrastination in college students." Iranian Journal of Public Health 50, no. 11 (2021): 2263.

[6] Murphy, Laurie, Nina B. Eduljee, and Karen Croteau. "College student transition to synchronous virtual classes during the COVID-19 pandemic in Northeastern United States." Pedagogical Research 5, no. 4 (2020).

[7] Viwattanakulvanid, Pramon, and Aye Chan Oo. "Influencing factors and gaps of blood donation knowledge among university and college students in Myanmar: a cross-sectional study." Journal of Health Research 36, no. 1 (2022): 176-184.

[8] Wang, Po-Yu, Kai-Li Chen, Shang-Yu Yang, and Pin-Hsuan Lin. "Relationship of sleep quality, smartphone dependence, and health-related behaviors in female junior college students." PloS one 14, no. 4 (2019): e0214769.

[9] Chen, Bo, Jinlu Sun, and Yi Feng. "How have COVID-19 isolation policies affected young people's mental health?–Evidence from Chinese college students." Frontiers in psychology 11 (2020): 1529.

[10] Ghorpade, Rutuja M., Nandkumar R. Kakade, and Tukaram B. Zagade. "Effectiveness of planned teaching programme about 'E-waste management'among Jr. College going students." Ecology, environment & conservation 26 (2020): 166-169.

[11] Montalto, Catherine P., Erica L. Phillips, Anne McDaniel, and Amanda R. Baker. "College student financial wellness: Student loans and beyond." Journal of Family and Economic Issues 40, no. 1 (2019): 3-21.

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Cloud Sharing System Based on New Media Data Network Dissemination of Exhibition Professional Spirit and Talent Training

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Abstract:The research is based on social network theory, taking the hot topic of "anti-corruption and promoting integrity" on Sina Weibo as an example, using programmatic access to Sina Weibo open platform to obtain data, and using social network tools such as Gephi for visualization. Higher vocational education must firmly establish vocational skills The concept of equal emphasis on training and professional spirit development, analyzes and discusses the professional quality training of students majoring in exhibitions in colleges and universities from the two aspects of "professional quality training principles" and "professional quality training characteristics". By optimizing the curriculum system, deepening the integration of production and education, strengthening the school Measures such as cooperation between enterprises and enterprises, cultivating double-qualified teaching teams, and giving full play to the role of campus cultural integration and educating people.

Keywords: Cloud Sharing System, New Media Data, Exhibition Professional Spirit, Talent Training

1. INTRODUCTION

With the popularization of 4G networks and smart mobile terminals, new media such as WeChat, Weibo, and Internet TV have become new platforms for the dissemination of online public opinion information due to their convenience, immediacy, huge data volume, and powerful aggregation capabilities [1]. Improper handling of public opinion information triggered by online hotspot events may cause group polarization, cause huge negative social impacts, and even lead the government to fall into a crisis of credibility. The relationship between national talent supply and demand is undergoing profound changes [2].

In the future, the criteria for considering technical and skilled talents in society is no longer limited to the single indicator of "practicality and operability" of skills, but tends to be diversified, and pay more attention to people's professionalism and sustainable development ability [3]. College students are the main user groups of new media. They use the meager platform to express opinions, discuss current affairs, exchange information, obtain information, express their emotions, pay attention to social hot news, follow posts, and make comprehensive judgments and screening of meager and massive information, and then publish themselves views [4].

People’s reading habits have also undergone significant changes. The survey data shows that in 2019, the contact rate of digital reading methods among Chinese adults was 79.3% [5]. Mobile phones and the Internet have become the main body of people’s daily contact with the media [5]. Under this background, the talent training model of higher vocational exhibition planning and management in Guangdong needs to make major adjustments to adapt to the new trend of innovation and development of the exhibition industry in the Guangdong-Hong Kong-Macao Greater Bay Area [6].

The career planning competition is a popular science and technology activity for college students. It is based on the combination of classroom teaching and higher than the level of classroom teaching [7]. It is a competition to test students' basic theoretical knowledge and ability to solve practical problems. About "University Humanities" "Spirit", which was first discussed in "University" in my country: "The way of the university is to be bright and virtuous, to be close to the people, and to end in perfection." [8] Although the "university" here is different from the current university, it also clarifies the purpose of the university: to cultivate "people with perfect personality" [9].

In this context, in order to improve the quality of personnel training, higher vocational colleges should establish a comprehensive, scientific, reasonable, effective and sustainable student management system, and continuously improve the level of student management [10]. A topic of great research significance. The World Expo is not an exhibition in the general sense, it is a world-class top exhibition, and it is the three major events on the same level as the Olympic Games and the World Cup [11]. The World Expo has become a carrier of urban development in the form of large exhibitions, large exchanges and large cooperation. Under the traditional educational concept, talent training in vocational colleges focuses on improving students' vocational skills, ignoring the development of students' humanistic quality. The talents trained by vocational colleges have superb professional skills, but many students cannot fully tap their talents after entering the post [12].

In the face of the current strong momentum of development in the exhibition field, this education model is far from meeting the demand for talents, so there is an urgent need to improve the level of education [13]. The exhibition major is an emerging education major. How to carry out the comprehensive education and training has become the main problem that many colleges and universities focus on solving [14]. The new media applications and technologies represented by Weibo have had a profound impact on the dissemination of online public opinion information in my country, and have brought new challenges to the supervision of the dissemination of online public opinion information in the existing new media environment [15].

These studies have formed profound results and provided valuable research experience for subsequent scholars. However, from the perspective of social science, it focuses on

the research on public opinion dissemination [16], evolution mechanism [17], and guidance and control [18-19] of network hot events. Based on this, this paper focuses on the integration of professional skills and professional spirit. From the perspective of higher vocational talents training strategies, it is hoped that it can effectively improve the training level of professional talents in higher vocational colleges, and realize the strategic transformation of higher vocational education from "seeking large by quantity" to "strengthening by quality". It is the sum of the beliefs, attitudes, opinions and emotions expressed by many people about various phenomena and problems in society [20]. Network public opinion refers to the popular online public opinion on social issues that is popular on the Internet and is a form of social public opinion.

2. THE PROPOSED METHODOLOGY

2.1 The New Media Data Network

At the theoretical level, based on the social network analysis method, it studies the characteristics, process and laws of network public opinion dissemination in the new media environment. At the practical level, taking the hot topic of “anti-corruption and promoting integrity” on Sine Weibo as an example, when network information declines or even disappears, it will be reactivated by utility value, forming a cycle of development and a spiraling upward trend. Combined with the characteristics of the network information life cycle model, the relevant information of "hot topics" in Sina Weibo is used as the data base. New media is a form of media that emerges under the support of new technologies, including digital broadcasting, mobile TV, SMS, digital TV, mobile internet, etc.

New media can provide the public with personalized content, and it is a medium for communicators and receivers to conduct personalized communication. Issues such as evaluation indicators and systems [6], and the key and approach of the integration of academic journals and new media [7] have been launched research.

However, from the perspective of the research object, the existing research mainly focuses on the WeChat public account established on the basis of a single journal. The social characteristics are reflected in the individual and group behaviors in the social network, and the network public opinion dissemination among users has a strong impact. Dependency and clustering characteristics; multi-dimensional characteristics are reflected in the new media environment, individual users and groups who disseminate online public opinion information present different group attributes of social networks. Basic skills required to achieve a certain occupation within a specified time.

2.2 Cultivation of Exhibition Professional Spirit and Personnel Training

As a modern producer service industry, the exhibition can bring a large amount of information flow, technology flow, logistics and people flow, which plays an extremely important role in the industrial upgrading advocated by the Greater Bay Area. The exhibition economy itself has a certain economic volume. First of all, one of the notable features of the knowledge economy era is the further strengthening of subject knowledge in the degree of differentiation and synthesis. Career planning competitions require participants to be proficient in a certain professional knowledge and at the same time. To strengthen the learning, internalization and reorganization of relevant subject knowledge, the cultivation of "university humanistic spirit" can be started from the following aspects.

Establish a "people-oriented" educational concept, truly focus on students, and pay attention to the development of students' individuality; establish a humanized teaching management system, and use flexible, diverse, and more humane education methods. And through the integration of knowledge and transfer learning to continuously improve their knowledge innovation and practical innovation ability. Through these two multiple-choice questions, it can be seen (see Figure 2-6 and Figure 2-7) that most students have and a clear understanding of the lack of professionalism. In the topic of "Professionalism that students already possess", except for the vocational skills option and a very small number of students who think they do not have any professionalism, the course of "vocational enlightenment education" is set up to strengthen vocational guidance during the internship period and cultivate self-transcendence ability.

Under the "new situation", the cultivation of high-skilled "specialized" talents is not achieved overnight. The cultivation of such special talents requires a long training period. Therefore, students' interest in learning should be stimulated at the beginning of entering the school, and students should learn actively and actively. absorb. Vocational colleges should further change the concept of talent training, improve top-level design capabilities, change from attaching importance to students' vocational skills training to vocational skills training and professional spirit development, and realize the organic integration of the two in the teaching of professional courses. Exhibition talents in professional teaching In the process, we must carry out comprehensive education and training, adhere to the integration of theory with practice, and be guided by ability training, especially focusing on the training of core management talents. Therefore, the quantity and quality of enrollment must be controlled to avoid blind expansion.

2.3 Development of Cloud Sharing System for Talent Training

Using the method of hashtags, the public opinion topics in the "Shanghai police tripped children" incident corpus were identified, and the corresponding topic events and the time when the topic was created were counted. The impact of negative network public opinion on college students based on time series is shown in Figure 1 below. The development trend of this microblog event is more prominent. In November 2018, the number of microblogs about the impact of negative online public opinion on college students was relatively large, and the number of discussions in the following three months showed a gradual downward trend. The cultivation of students' innovative ability is a gradual process. Students at different learning levels, innovative forms and Requirements are also different. P is a globally fixed segmentation threshold, then can divide the image into two-pixel clusters [13]. It is expressed as:

Therefore, colleges and universities should carefully study the relationship between career planning competitions and the cultivation of innovative talents in combination with practice. The exhibition industry is highly comprehensive, interoperable, and intertwined, and requires exhibition people to have a good teamwork spirit. Especially like some large-scale exhibition activities related to the image and development of a city, region, and country, it requires the sincere cooperation and full dedication of all exhibition personnel. This paper discusses and analyzes the main problems existing in the management of students based on the

cultivation of professional spirit. The author believes that those problems have greatly affected the further development of the education of students' professional spirit cultivation, so this research should not stop there. , and should also be implemented at the practical level.

Social practice is highly comprehensive. It is not only the second classroom for students, but also an important way for students to integrate into life and go to society. Vocational colleges should take advantage of the social practice platform to integrate vocational skills and professionalism in the experience of practical activities. It is necessary to further improve the level of current teachers through training, learning and other activities, and provide more opportunities for teachers to communicate and promote the improvement of overall strength. Secondly, the school can invite some staff from exhibition companies to teach in the school as part-time teachers. Generally, it is difficult for these teachers to teach all day.

3. CONCLUSIONS

Based on the social network analysis method, from the perspective of network public opinion information dissemination in the mobile environment, this paper takes Sina Weibo as the data source. It sorts out the exhibition professional post group, clarifies the career development path of the graduates of the exhibition major, and analyzes the professional ability of the exhibition major. Structure, build a curriculum system incorporating "greater bay area elements", and systematically design the talent training program for higher vocational exhibition planning and management professionals. Based on the comparison of data related to network public opinion on mobile and non-mobile terminals, the social network attributes of network public opinion information dissemination in mobile and non-mobile environments are analyzed.

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5. REFERENCES

[1]Wen Xiaoli. Research and Exploration on the Talent Training Program for Higher Vocational Convention and Exhibition Planning and Management in the Background of the Guangdong-Hong Kong-Macao Greater Bay Area [J]. Journal of Urumqi Vocational University, 2019, 28(3):5.

[2] Yang Jinshuan, Jiang Xueer. Research on the talent training model of "four layers, three environments, three reforms and three evaluations" based on the integration of vocational skills and professional spirit [J]. Education and Vocation, 2022(8):5.

[3] Zhang Tao. Research on College Chinese Education and Industry Spirit Cultivation——Based on Professional Talent Cultivation in Industry Colleges [J]. Journal of Changjiang Engineering Vocational and Technical College, 2021, 38(3):4.

[4] Liu Ying. Exploring the comprehensive training mode of vocational skills and professional spirit of vocational students in higher vocational colleges——Taking the major of forestry technology in higher vocational colleges as an example [J]. 2021(2017-8):46-48.

[5] Xu Huiling, Zheng Yanan, Li Meiju. Research on the internalization development path of vocational spirit of secondary vocational students based on "craftsman spirit"——Taking the hotel service and management major of Zhengzhou Finance and Trade School as an example [J]. China Nationality Expo, 2020, No.173(01):99-101.

[6] Wu Wei, Liu Ying. Analysis on the integration of vocational skills improvement and professional spirit training of higher vocational students [J]. Theoretical Research and Practice of Innovation and Entrepreneurship, 2019(1):2.

[7] Peng Xiaoxing. Research and Practice of Course Reform of "Information Technology and Communication Navigation System" Based on the Training of Guiding Craftsmen [J]. Journal of Zhejiang International Maritime Vocational and Technical College, 2021, 017(002):P.61-65.

[8] Yuan Jun. Research on the path of developing "craftsman spirit" among students in higher vocational colleges [J]. Science and Technology Economics Guide, 2020, v.28;No.730(32):113-114.

[9] Ma Aihua, Wang Huaiyi, He Jiancun, et al. Development and application of early warning and forecasting system for long-distance water supply projects in alpine regions based on private cloud platform [J]. Water Resources World, 2020, 003(006):49-52.

[10] Li Tao. Exploration of the cultivation path of innovative and entrepreneurial talents in higher vocational colleges based on the cultivation of craftsman spirit [J]. Career Time and Space, 2019.

[11] Yao Tao, Zhang Yuanyue. The practice of the integration of professional skills and professional spirit in customs declaration and international freight transportation——Taking Shaanxi Vocational and Commercial College as an example [J]. Journal of Wuxi Commercial Vocational and Technical College, 2020, 20(2): 6.

[12] Mei Ye. Cultivation mode of artisan talents in intelligent port container transportation based on ecosystem theory [J]. Journal of Guangdong Vocational and Technical College of Transportation, 2021, 020(001):P.81-85,90.

[13] Chen Xiaoyu. Optimizing the Integrated Training Mechanism to Promote the Training of Technical Skilled Talents——A Brief Review of "Research on the Integrated Training of Vocational Skills and Professional Spirit of Higher Vocational Students" [J]. Journal of Wuhan Vocational and Technical College, 2020, 19(1):1.

[14] He Fengqiong, Yu Hongchun, Xie Zhaomin, et al. Research on the training mode of skilled talents with craftsman spirit [J]. Neijiang Science and Technology, 2019(3):2.

[15] Jiang Huan. Promoting the reform of higher vocational talents training mode, cultivating great country craftsmen and skilled craftsmen: Review of "Research on the Integration of Vocational Skills and Professional Spirit of Higher Vocational Students" [J]. Vocational Education, 2019, 18(18):1.

[16] Wang Jiaqi. New thinking on the teaching of accounting in higher vocational colleges from the perspective of collaborative cultivation of vocational skills and professional spirit [J]. Science Consulting, 2021(29):1.

[17] Zhang Zheng. The training strategy of mechatronics professionals in higher vocational colleges based on professionalism [J]. Quality and Market, 2021(5):2.

[18] Liu Xinli. Using "craftsman spirit" to innovate the talent training model of vocational education [J]. Future and Development, 2020, 44(9):6.

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Regional Dance Image Feature Recognition Model and Contemporary Inheritance Modeling Algorithm Based on Intangible Cultural Heritage Filter Algorithm

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Abstract:Combining the characteristics of blockchain technology with distributed ledger, consensus mechanism, encryption algorithm, etc., this paper proposes a filtering algorithm based on intangible cultural heritage, builds a video tracking scanning imaging model of dancers in ethnic areas, and detects the edges of video images of dancers in ethnic areas. The contour model is used to enhance the video images of dancers in ethnic areas according to the initial contour distribution, and establish a visual perception model of the dancers in ethnic areas. Sequence, the posture probability of the observation sequence is obtained through the forward-backward algorithm, and the corresponding posture of the hidden Markov model with the largest observation sequence probability value is the dance tossing posture that needs to be recognized.

Keywords: Regional Dance Image, Image Feature Recognition, Contemporary Inheritance Modeling, Intangible Cultural Heritage Filter

1. INTRODUCTION

With the informatization of weapons and equipment, weapons pursue the ability to accurately hit the target, and electronic image stabilization has become an important design requirement for missile-borne, airborne, and shipborne optoelectronic equipment [1]. Electronic image stabilization is based on the correlation of image information between frames of video image sequences and uses image processing methods to shake the camera system. It uses CCD to replace the traditional holographic dry plate to record holograms and uses computer simulation of reference light to achieve object light wavefront reproduction [2]. The traditional holographic technology needs to perform chemical wet processing on the recorded object and cannot directly obtain the object data information.

Digital holography technology and its applications are more and more popular, and its application range is very wide, such as homeland security [3], optical security and encryption [4], and compressed holographic imaging [5]. The object of music image research is the visual artworks with musical themes or content that are copied and copied, including music (including dance) images handed down from ancient times and archaeological excavations, that is, art works (paintings) with music as the theme and involving music and dance phenomena. ,sculpture) [6]. After image acquisition, image processing and understanding are required, including image enhancement, image restoration, image compression, image segmentation, and object recognition [7]. The purpose of image restoration techniques is to improve images with degraded quality [8].

In the process of image acquisition or transmission, traditional identification methods can be divided into identification items (such as cards, keys, etc.) and identification knowledge (such as usernames, passwords, etc.). Disadvantages (such as easy loss or theft), it is easy to be impersonated. For example, the side-suppression comparison model proposed by hti et al. [9] based on features such as color, brightness, and direction can better detect salient objects in the case of low image signal-to-noise ratio.

This paper chooses the ELM algorithm as the learning method because ELM is faster than traditional learning algorithms in traditional neural networks, especially in single-hidden layer feedforward neural networks (SLFN), and the learning results are more accurate [10]. Generally speaking, image denoising methods can be divided into two categories, spatial domain filtering method and frequency domain filtering method. The spatial filtering method is to directly perform simple algebraic operations on the gray value of some pixels to estimate the noise-free gray value of a pixel, such as the neighborhood mean method, the neighborhood median method, etc. [11]

Among them, the mean value method has a good inhibitory effect on the particles in the image. In one frame of image, for the point target, its area only occupies one pixel point [12], and the grayscale is obviously different from the grayscale of the surrounding adjacent pixels. The difference is reflected in the frequency spectrum, that is, in the high-frequency part, which is similar to high-frequency noise [13]. At present, computer vision is widely used in image generation, vehicle monitoring, target tracking, etc., and has broad application prospects in various fields such as medical care, agriculture, and transportation [14].

In recent years, the ability of computer image processing has been continuously improved, and the development of computer vision has become more and more mature. At present, computer vision is widely used in image generation, vehicle monitoring, target tracking, etc., and has broad application prospects in various fields such as medical care, agriculture, and transportation. In recent years, the ability of computer image processing has been continuously improved, and the development of computer vision has become more and more mature. Deng et al. [15] constructed a 3-layer fully connected neural network for hand rotation angle estimation in hand detection. There are also feature matching methods based on SIFT [16-17], SURF [18] [19] and ORB [20] features.

Speckle noise is the most typical example. When a highly coherent laser is reflected on the surface of a rough object, the wavelets scattered by various points on the object are

coherently superimposed in space, forming a random distribution of spatial intensity and granularity. Laser speckle. The feature matching method has the advantages of high estimation accuracy and large angle estimation range, but the computational complexity of feature extraction and feature matching is relatively large. The speckle noise of reconstructed holographic images limits the development of all the above applications, therefore, image denoising has always been a hot research area in digital coherent imaging.

2. THE PROPOSED METHODOLOGY

2.1 The Non-Legacy Filter Filtering Algorithm

Experimental environment configuration: Python3.7, GTX2070, InterCorei9-9900KF3.60GHz CPU and 16GB memory. In order to verify the performance of the algorithm in this paper, the manual collection of rotating video and image data is used to test the performance of the grayscale projection method and the GPCF algorithm respectively. BM3D is known as the state-of-the-art in image denoising. The algorithm includes basic estimation and final estimation, each of which is realized by three operations, block matching, 3D collaborative filtering in sparse domain, and reconstruction, respectively.

BM3D is also used to suppress speckle noise in digital images. When applying the noise-based detection method for image filtering, it is obvious that the detection performance of the impulse noise detector is very important. Noise detection often produces more noise misjudgments and missed judgments. Among all color spaces, CIELAB color space is often used as color in the field of visual computing because it separates luminance components and chrominance components.

It will directly affect the final filtering effect. Machine learning performs well in dealing with pattern classification and regression problems. Various machine learning methods such as BP neural network, support vector machine, Bayesian decision-making and other methods are widely used in the fields of fingerprint recognition, face recognition and multi-biometrics recognition. This paper proposes a text line sequence recognition algorithm consisting of three steps: feature extraction, sequence modeling and sequence prediction. In order to improve the accuracy of the recognition model for characters of different scales in text line images, a convolution module that can obtain adaptive receptive fields is proposed. Kuan filtering is a weighted adaptive filtering algorithm, which is used to filter out speckle noise, Smooths the image without affecting the edges of the image. Its main features are: First, the multiplicative noise is converted into signal-related additive noise.

2.2 The Regional Dance Image Feature Recognition Model

The objective indicators of the four algorithms in Figure 3 are further compared, and the experimental results are shown in figure 1. Through the objective index analysis in Figure 2, the PSDN increases by as much as 90%. RMSE is reduced by up to 50% and SSIM is improved by up to 105%. The analysis of the musical tone level needs the support of the corresponding interpretation theory system, that is, the musical morphological system. Although the basic theory about the form of Chinese local music has a history of thousands of years, for each pixel in the image, a filtering window (usually 3×3) is determined with the pixel as the center, and each pixel in the window is first calculated to all other the aggregation distance of pixels, and then select the pixel with the smallest aggregation distance to replace the central pixel of the filter window.

The arc-shaped profile is more consistent with the principle of aerodynamics and can effectively reduce the effect of wind loads. In this regard, some high-rise building complex planes can use elliptical or circular shapes. This chapter mainly studies the text recognition algorithm of travel document images, text recognition Converting images containing text information into strings that computers can efficiently read and write. Text recognition algorithms can be roughly divided into two categories: character-level text recognition algorithms and sequence-level text recognition algorithms. Extreme learning machine is a single hidden layer feedforward neural network, which has the advantages of fast training speed and strong generalization ability and is suitable for classification and regression problems. In this paper, an extreme learning unit is used to build a deep learning model - stack extreme deep learning machine, which is used to extract high-level feature representations of biometric images.

From the overview and brief analysis of the above four speckle noise filtering algorithms, they are all based on the different characteristics of the speckle noise image, and different pertinent speckle filtering algorithms are obtained by using different mathematical tools. In modern times, there are also a series of research results by scholars such as Yang Yinliu, but there are not many achievements in extracting music theory and rhythm theory from the melody level of native music of many ethnic minorities in China. The new filtering algorithms we propose include: Two distinctive features. First, a simple impulse noise detector is employed, which can quickly and efficiently detect noisy pixels in color images. Second, in the construction of RNFN, a new membership function is adopted.

2.3 The Image Feature Recognition Model and Contemporary Heritage Modeling Algorithms

Guided image filtering is an edge smoothing filter that can achieve image edge smoothing, detail enhancement, and image fusion denoising. It is a powerful filter. The shape completely imitates the gourd. The playing images depicted on the bronze cucurbit sheng and other bronzes show that the cucurbit sheng played an important role in the daily life of the Yunnan people. In the ancient Dian culture period from the Warring States Period to the Western Han Dynasty, the gourd Sheng made by hollowing out the gourd was widely used by ordinary people.

There are 10 images under each directory, and each directory represents a different person. All images are stored in PGM format, grayscale, and the image size and width are 92X112. All images were taken against a dark, uniform background, with frontal faces (some with a slight sideways bias). Image saliency is both global and local. The feature extracted above, the color is only one of the attributes based on a certain pixel, which can be easily used to calculate the global saliency and can also be used for regional comparison. Texture is a region modulo Gaussian filter is a linear smoothing filter, which can remove the details in the image and reduce the noise of the image. In this algorithm, Gaussian filtering is used to eliminate high-frequency noise and at the same time overcome boundary effects. Action recognition has experienced a long development process, and gesture recognition and body motion recognition are all low-level human motion analysis.

The essence of action recognition in dance video images is motion recognition, which belongs to the advanced stage of human motion analysis. The SIFT feature point matching method is used to calibrate the continuous rotation video image data (the rotation angle of the video changes from 0° to 20°), respectively. The estimation results of the grayscale projection method and the GPCF method are compared with the calibration results. Table 2 shows the grayscale projection method under the input size of 360*360pixel and 720*720pixel.

3. CONCLUSIONS

Based on the filtering algorithm of intangible cultural heritage, this paper studies the tracking technology of dancers in ethnic areas, analyzes the movement characteristics of dancers in ethnic areas, and conducts expert guidance and judgment through feature extraction methods to improve the pertinence of training and the ability to standardize and correct movements. A tracking technology for dancers in ethnic areas based on contour model and AdaBoost algorithm is proposed, which effectively improves the accuracy of dancing tossing gesture recognition using Hidden Markov Model. And through experiments, it is verified that the model in this paper can effectively recognize the dancing and tossing gestures in the video with or without shadows, and the recognition accuracy is high.

4. REFERENCES

[1]Cai Jinkang, Zhao Rui, Deng Weiwen, et al. Driver identity recognition modeling method based on braking feature and SVM algorithm: CN112418315A[P]. 2021.

[2] Ji Yutian. Surface Feature Extraction and Topological Simplification Based on Piecewise Linear Morse Theory [J]. Advances in Lasers and Optoelectronics, 2022, 59(8):7.

[3] Jing Huahua, Yan Tao, Liu Yuan. A light-field image spatial super-resolution algorithm integrating global and local features [J]. Journal of Nanjing University: Natural Science Edition, 2022, 58(2):11.

[4] Cai Jinkang, Zhao Rui, Deng Weiwen, et al. Modeling method for aggressive driving recognition based on simulated driver and SVM algorithm: CN112288023A[P]. 2021.

[5] Du Xuejing, Zhang Meiou. Research on Lane Line Recognition Algorithm Based on Fusion of Optical Flow Method and Background Modeling Method [J]. Journal of Chongqing University of Technology: Natural Science, 2021.

[6] Wang Qi, Li Xuelong, Bai Sikai. A lightweight video behavior recognition method based on long-term and short-term temporal modeling algorithm: CN111401149A[P]. 2020.

[7] Xue Rui, Zeng Realization. Modeling and Evaluation of Gait Phase Recognition System Based on Transformation Sequence Algorithm and Decision Tree [J]. Electronic Components and Information Technology, 2020, 4(8):2.

[8] Chen Peihao, Xiao Duo, Liu Hong. Video fire recognition algorithm based on deep learning [J]. 2021.

[9] Li Yu, Wang Shuyun, Zhao Quanhua. Iterative Filtering of SAR Image Based on Speckle Statistical Property Preservation [J]. Journal of Electronic Engineering, 2021, 49(9):1809-1817.

[10] Zheng Yang, Zhang Xudong. Video Behavior Recognition Algorithm Based on Collaborative Spatio-temporal Modeling [J]. Intelligent Computers and Applications, 2021.

[11] Ding Chao, Zhang Qiuyan, Zhang Changxiang, et al. Recognition method of digital substation metering image based on improved deep learning algorithm [J]. Computer Science and Application, 2021, 11(3):10.

[12] Cao Chengrui. Fine-grained image inpainting based on dense discrimination and attention feature propagation [D]. Lanzhou University of Technology, 2020.

[13] Xin Haijiao. Living protection of the construction techniques of seagrass houses [J]. Huaxi, 2022(20):3.

[14] Li Chengshi. The industrialization development practice of intangible cultural heritage techniques of Nixing pottery in Qinzhou [J]. Tiangong, 2022.

[15] Ma Hong, Jiang Yuan. Aesthetic characteristics and value interpretation of Guangxi Nandan white pants and Yao clothing patterns [J]. Western Leather, 2022, 44(12):3.

[16] Xiao Xin, Liu Sen. The application of Guangxi Zhuang brocade pattern in the design of tourist souvenirs [J]. Hunan Packaging, 2022, 37(3):4.

[17] Li Yuqing. The practice and thinking of the inheritance of intangible cultural heritage from the perspective of cultural capital: Taking Suzhou embroidery as an example [J]. Jingu Wenchuang, 2022(27):3.

[18] Li Jiahui. The Dissemination and Reconstruction of Intangible Cultural Heritage in the New Media Era—Taking the Bilibili Video Platform as an Example [J]. Daguan: Forum, 2022(5):3.

[19] Guo Shuting. The role of 3D printing on the inheritance of She nationality silverware intangible cultural heritage [J]. Collection and Investment, 2022, 13(6):3.

[20] Yang Hong. "Intangible Cultural Heritage + Technology" Explores the Organic Combination of Inheritance and Creation [J]. Big Data Era, 2022.

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Design of Sports Decision Model Based on Data Mining and Neural Network

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Abstract:In our country, the physical training of college students is mainly based on classroom learning and supplemented by amateur exercise. It is basically in a disordered state. There are many unreasonable factors that cannot meet the needs of college students to improve their physical fitness. My country's traditional sports industry of college students' sports a new way of dissemination of sports information has emerged because of sports-related data deep mining, and the sports evaluation decision-making support system is optimized. Based on data modeling and factor analysis of sports, summing up 8 winning factors, this paper studies the design of sports decision-making model.

Keywords: Sports Decision Model, Data Mining, Neural Network, Big Data

1. INTRODUCTION

The degree of mastery of translation learning has dynamic grasp and clear cognition. College English teachers should deeply learn and understand the requirements of translation courses from the course structure and macro level, and constantly update the information mode of translation course teaching, so that college English teachers can truly become participants and implementers of college English translation course teaching information reforms [1-6].

Data mining technology and information processing technology are used to make intelligent decision-making for sports evaluation. Through the data collection of sports related information and sports performance summary of athletes in the early stage, it provides data support for athletes' next training. Therefore, research on sports evaluation decision support system has positive significance in improving the scientificity and rationality of sports training [7-11].

The sports training of professional athletes attaches great importance to training and scientific research, and has a relatively complete scientific training system, such as a team of high-level professional coaches, comprehensive evaluation groups such as physiology, biochemistry, and psychology, medical supervision, and information exchange, Life management and other groups as a guarantee. However, the management of sports training for college students is far from reaching such a high level. In my country, college students' sports are generally based on physical classroom learning and amateur exercises, which are basically in a state of disorder, which cannot achieve the goal of my country's physical education "to strengthen students' physical fitness, promote physical and mental development, and train students to engage in the awareness, interest, habits and ability of sports, improve sports literacy, and lay a good foundation for lifelong sports." [12-16]

But the system is a highly complex intelligent data analysis and processing platform, and its core technology is the precise recognition technology of human posture. In recent years, human gesture recognition technology has gradually matured, and the key parameters to measure the performance of gesture recognition algorithms are real-time and accuracy [1]. With the development of artificial intelligence technology, deep learning of neural network has been widely used in many fields [2]. Backpropagation (BP) neural network has the advantages of high adaptability, simple principle, and easy implementation.

Chinese scholars have developed an intelligent decision support system for sports psychological consultation and psychological training for psychological training in sports training. The system has the functions of psychological disorder type diagnosis, psychological disorder degree diagnosis, competitive mental ability diagnosis, and psychological training method selection. It realizes the organic combination of qualitative and quantitative sports psychological consultation in training, and implements systemic psychology for the whole process of athletes' physical and mental development. Consultation and training provided a reference. The sports decision-making sports evaluation system can be installed with This will reasonably allocate sports information resources the IEEE 488.2 standard, the Internet of Things protocol is constructed for sports-related information data collection, and the HP E1485A/B to meet the needs of organizations and individuals at all levels. The demand for sports information evaluation decision support. Human-computer interaction, using GNU development tools of X86 architecture for system VIX bus data collection [17-20].

Chinese scholars have also established a system model for the diagnosis and evaluation of athletes' competitive ability for individual sports, rowing and weightlifting, with the goal of exerting the best state of each factor of the competitive ability, and established the decision-making for the optimization design, simulation and regulation of the sports training process The support system, which integrates the whole process of sports training, can not only reduce the work intensity of coaches and managers, but also provide a scientific reference for coaches to control training [21-24].

Of course, when studying boxing skills and tactics training, it is necessary to systematically combine the questionnaire with the text information of books and other contents to enrich the

cognition and understanding of boxing technical and tactical training. Considering the characteristics of the current information age, online literature and research results can be used to enrich our specific understanding of boxing skills and tactics training activities. The development of any subject is not only inseparable from the names of outstanding scholars in this subject field. Chinese scholars have established a high-level intelligent support environment for decision-making in the field of sports, which provides a powerful auxiliary decision-making tool for high-level decision makers to make national macro-level sports development strategic decisions and regional departments' overall development strategy decisions.

2. THE PROPOSED METHODOLOGY

2.1 The Sports Decision Model

Sports decision prediction is a highly nonlinear prediction problem. Its input and output can be regarded as a special mapping relationship, and it is a prediction related to time series. There are data showing that neural networks have good applications in non-linear time series, and from Chapter 1, Section 2 we know that neural networks have also achieved good results in Sports decision prediction, so theoretically BP network is feasible for Sports decision prediction. Data processing, storage and determination of decision-making indicators. After the physical test data is obtained, the desensitization process is performed first, and the data of absent and exempt students are deleted at the same time, and then 7000 pieces of data are obtained. According to the "National Student Physical Health Standards" issued by the Ministry of Education, the evaluation indicators of physical fitness mainly include height, weight, lung function, endurance, reaction force, explosive force, speed, flexibility, waist and abdomen strength, latissimus dorsi strength, and upper limbs. And the strength of the lower limbs. Data processing process of sports evaluation decision support system. Since my country resumed sports, which had been suspended for nearly 28 years since 1986, the primary task at that time was to achieve a gold medal breakthrough at the 11th Beijing Asian Games. Since my country's boxing had only just recovered at that time, the foundation was poor and the level was low. In order to improve the level of my country's boxing as soon as possible, many experts from North Korea, the former Soviet Union, and Cuba were invited to teach in our country. Due to ethnicity and other reasons.

With reference to the index system, the standards for judging college students' physical fitness are divided into 7 test items: BMI (height to weight ratio), vital capacity (lung function), long-distance running (endurance, 50 meters (explosive power), sitting and lying body Front drive (flexibility), standing long jump (lower limb strength), pull-ups (upper limb strength and waist and abdomen strength, boys), sit-ups (waist and abdomen strength, girls), realize the unitization of these indicators, and complete the corresponding data in the database Table creation.

so it is usually used in gesture and action gesture recognition. Because the information provided by newspapers, magazines or horse racing websites is not consistent, the horse racing analysis and prediction provided by horse critics are also different, the background database structure of each website is also different, and the forms published on the website are also different.

2.2 The Data Mining

Therefore, it is difficult to be scientifically accurate when people analyze the information provided by various aspects and bet on the fastest horse they think is the fastest. To achieve rapid and accurate horse racing analysis and prediction, it is necessary to use or establish some automated tools to quickly obtain the data we want. As a specific step in the knowledge discovery process, it is a series of technologies and their applications. Or it is a collection of methods for investigating and modeling large-capacity data and the relationship between data.

And to achieve unified management of horse racing data. When analyzing and comparing a large amount of original data, remove unnecessary data redundancy, ensure the consistency of original data, obtain useful knowledge, and then use the obtained knowledge for comparison, and finally achieve accurate prediction results and realize advanced modern management of horse racing information. . When using support vector machine for stock price forecast analysis. The setting of the preset document generally includes items such as book title, author, language, unit price, subject to which the document belongs, document content, publishing house, and publication time.

Its goal is to convert large volumes of data into useful knowledge and information. At present, data mining technology has been applied in many industries and achieved certain practical results. In a certain order of priority, by setting multiple filtering conditions, the records that have participated in the same race schedule as the current match to be predicted are selected from the database by setting multiple filtering conditions, and the recorded time is regarded as tl. If not, it means that the horse has not participated in the race of the schedule, and the information of similar horses in the same shift can be used as a reference. In Len Bass's "Practice of Software Architecture", software architecture reconstruction can be divided into activities.

The so-called "Internet +" means "Internet + traditional industries". Use modern Internet information technology to infiltrate and diffuse in various sectors of social production and life, deep integration with it, and mutual application. This is not purely adding the Internet to traditional industries, but the emergence of a new social form, actively exerting the integration and optimization functions a very important part of determining the accuracy of the forecast model is how to effectively select each component of the input vector and select the analysis object fields of social production.

2.3 The Neural Network

The guiding role of college English teachers. More importantly, the fundamental purpose of the reform of the teaching informatization of At present, people do not know enough about the mechanism of nonlinear problems such as the fluctuation of the Shanghai Stock Exchange. Therefore, experience plays an important role. In this paper..

the daily closing price of the Shanghai Composite Index on the previous trading day is selected as the input vector, and the closing price of the next day, i.e. the first day, is selected as the analysis object. In the support vector machine, the selection of the kernel function determines the structure of the feature space, and the selection of the parameters of the kernel function affects the prediction accuracy. Generally, the fitting effect of radial basis kernel function is better than other kernel functions. Important selected parameters are as follows, This paper uses OpenPose to expand the design, which is a C++

real-time multi-person key point detection and multi-threading library based on OpenCV and Caffe is a supervised learning algorithm that is often used to train multilayer perceptrons a simple structure for people to simulate the human nervous system, the simplest analog neuron, which means that the neuron receives 2 input signals $x1$ and $x2$, and outputs 1 output signal a after processing. The processing of a single neuron is generally a simple linear operation and a nonlinear activation, so $w1$ and $w2$ are the weight parameters corresponding to the input $x1$ and $x2$ respectively, and b is the default bias parameter, although b is not in the neuron Make it clear, but every neuron must have it. g is the activation function, a non-linear operation, it can have a variety of options, the detailed activation function will be introduced in the next section.

OpenPose provides real-time positions of 18 body joints, as shown in Figure 2. The article obtains data containing body part locations and detection confidence in JSON format. These 18 joint coordinates can fully and uniquely represent each pose and ensure low computational complexity. However, since these pixel-based descriptors will change during the geometric transformation, it is difficult to define a distance metric. This paper uses joint trajectory estimation to solve this problem. Analysis and prediction cannot be made out of thin air, it must be based on a large number of existing events and horse data.

3. CONCLUSIONS

In order to improve the behavior of college students' sports prediction and decision-making, data predicting is provided for the system through sports-related data mining, and the sports evaluation decision-making support system is optimized. This paper studies the design of sports decision-making model based on big data mining model and neural network algorithm. First, the necessity and function of sports decision-making models are introduced. Traditional sports decision-making models cannot adapt to the diversified sports of the new era; then the application of data mining and neural networks in sports decision-making models is analyzed; finally, a sports decision-making model is designed.

4. REFERENCES

[1]Yuan Guiqin, Xiong Shengqing, Meng Qingmin, et al. Geophysical exploration technology and application research [J]. Acta Geology, 2011,85(11):1744-1805.

[2]Wang Genjian, Cai Hongmei, Lin Shanhua, et al. Research report on the development of geophysical exploration discipline [J]. Strait Science, 2011(01):10-17.

[3]Zhao.Review and prospect of development of high-precision seismic exploration technology[J]. Geological Prospecting for Petroleum,2009,48(05):425-435.

[4]Wang Hongli. Research on seismic imaging of complex structures in the South China Sea and its application[D]. University of Chinese Academy of Sciences (Institute of Oceanology, Chinese Academy of Sciences), 2018.

[5]Wang.China Resource Security Strategy——Taking Petroleum as an Example[J].Resources Science,2002(01):5-10.

[6]Yan Jiayong,Teng Jiwen,Lv Qingtian.Geophysical Prospecting and Application of Deep Metal Mineral Resources[J].Progress in Geophysics,2008(03):871-891.

[7]Wang Zhiqiang. Research on high-precision full waveform inversion method with non-smooth constraints[D]. Jilin University, 2018.

[8]Tarantola A. Inversion of seismic reflection data in the acoustic approximation[J]. Geophysics, 1984, 49(8): 1259-1266.

[9]Laily P. The seismic inverse problem as a sequence of before-stack migrations[C]//Society for Industrial and Applied Mathematics, Conference on inverse scattering: Theory and application, 1983: 206-220.

[10]Zhang Pan. Research on full waveform inversion based on low-frequency seismic wavefield reconstruction[D]. Jilin University, 2018.

[11]Research on full waveform inversion in time-frequency domain based on weak model dependent objective function[D]. Jilin University, 2019.

[12]Yu Kai, Jia Lei, Chen Yuqiang, et al. Yesterday, today and tomorrow of deep learning[J].Computer Research and Development,2013,50(09):1799-1804.

[13]Jiao Licheng, Yang Shuyuan, Liu Fang, et al. Seventy years of neural networks: review and outlook [J]. Chinese Journal of Computers, 2016, 39(08): 1697-1716.

[14]Guo.The research progress of deep learning[J].Computer Science,2015,42(05):28-33.

[15]Hinton, G. E. Reducing the Dimensionality of Data with Neural Networks[J]. Science, 2006, 313(5786):504-507.

[16]Arel I, Rose D C, Karnowski T P. Deep Machine Learning-A New Frontier in Artificial Intelligence Research [Research Frontier][J]. IEEE Computational Intelligence Magazine, 2010, 5(4):13-18.

[17]Fei-Yue Wang, Jun Jason Zhang, Xinhu Zheng, et al. Where Does AlphaGo Go: From Church-Turing Thesis to AlphaGo Thesis and Beyond[J].IEEE/CAA Journal of Automatica Sinica,2016,3(02):113 -120.

[18]Zhang Minmin, Xu Heping, Wang Xiaojie, et al. Google TensorFlow machine learning framework and application[J].Microcomputers and Applications,2017,36(10):58-60.

[19]Ye Lang. Research on Face Recognition Based on Convolutional Neural Network[D]. Southeast University, 2015.

[20]Luo P, Wang X, Tang X. Hierarchical face parsing via deep learning[C]// Computer Vision and Pattern Recognition (CVPR), 2012 IEEE Conference on. IEEE, 2012.

[21]Redmon J, Divvala S, Girshick R, et al. You Only Look Once: Unified, Real-Time Object Detection[C]// 2016 IEEE Conference on Computer Vision and Pattern Recognition (CVPR). IEEE, 2016.

[22] Mohamed A, Dahl GE, Hinton G. Acoustic Modeling Using Deep Belief Networks[J]. IEEE Transactions on Audio Speech & Language Processing, 2012, 20(1):14-22.

[23]Li G, Yu Y. Visual Saliency Based on Multiscale Deep Features[C]// IEEE Conference on Computer Vision & Pattern Recognition. IEEE, 2015.

[24]Qian Shaoxin.Using pattern recognition method to predict oil and gas reservoirs[J].Chinese Journal of Geophysics,1992(05):630-636.

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Application of Digital Modeling Technology in the Protection of Intangible Cultural Heritage

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Abstract:Intangible cultural heritage is an irreplaceable precious cultural resource. Under the premise of scientific protection and rational utilization, the application of modern scientific and technological means can break through the bottleneck that is difficult to sustain for the protection and utilization of cultural heritage. This article is based on the protection of intangible cultural heritage based on digital modeling technology. Based on the "tacit" feature of intangible cultural heritage, digital collection, storage, extraction and other technologies are used to fundamentally change the way of protection and utilization. It should be displayed from physical protection. The on-site protection display is transformed into a digital protection display, so that intangible cultural heritage resources can be effectively protected and used by 7.2%.

Keywords: Digital Modeling Technology, Intangible Cultural Heritage, Heritage Protection, Big Data, Remote Monitoring

1. INTRODUCTION

In the digital age, the combination of museums and digital technology enables people to browse the fine collections of museums around the world and enjoy 3D immersive visits and exhibitions at home and without leaving the house. The digital museum has undoubtedly expanded the space and means of museum display, and allowed the end of the exhibition to survive forever. Professor Chen Jianxian, deputy director of the Intangible Cultural Heritage Protection Center of Central China Normal University, said, “The number of Chinese netizens is huge, and the'digital museum' helps more people quickly understand intangible cultural heritage.” Domestic digital museums are relatively mature. "Forbidden City" and "Digital Dunhuang" [1-7].

At the same time, local cultural databases in various ethnic regions are also under active construction, aiming to collect intangible cultural heritage materials scattered among the people. Among the more representative ones are: Inner Mongolia ethnic folk cultural heritage database, Shaanxi cultural heritage database, Qiang intangible cultural heritage dynamic image database, Qiang intangible cultural heritage static image database, Qiang intangible cultural heritage 3D action database, Miao intangible cultural heritage image database and so on. The establishment of these databases uses the world's advanced image and digital technology to explore new ways of intangible cultural heritage protection. On the other hand, because the shadow puppet craftsmanship includes two levels of craftsmanship and shadow puppet performance, both the inheritors are required to master sophisticated production procedures and craftsmanship, and the performers are also required to have deep performance skills, which cannot be mastered overnight. Also, as the inheritors of the older generation continue to die, no one after the shadow puppet crafts and performances seriously threatens the inheritance and development of this folk art [8-12].

"A piece of cowhide is actually happy, anger, sorrow and joy, half of the face is full of loyalty, traitor and evil." As an intangible cultural heritage protection project, the ancient folk traditional art: shadow puppetry (dengsha) is one of the puppet theaters widely circulated in China. The reputation of "one of the best in China". At present, there are seven shadow puppet genres in China, including the Qin Jin Shadow System and Luanzhou Shadow System. Among them, the "living fossil" of shadow puppetry is the shadow puppetry in Huaxian County, Shaanxi. World movie theater originated in China, Chinese movie theater originated in Shaanxi, and Shaanxi movie theater originated in Huazhou. Huaxian shadow puppetry enjoys the reputation of "the founder of the film" in the world. With the rapid development of world economic integration and modernization, shadow puppetry has a narrowing foundation for survival. On the one hand, with the rapid spread of modern industrial civilization in the West and the invasion of Western cultural transmission methods, in the process of strong culture eroding weak and marginal cultures, my country’s cultural ecology is undergoing tremendous changes, and the shadow puppets as cultural heritage and their living environment are seriously threatened. On the other hand, because the shadow puppet craftsmanship includes two levels of craftsmanship and shadow puppet performance, both the inheritors are required to master sophisticated production procedures and craftsmanship, and the performers are also required to have a deep foundation in performance skills, which cannot be mastered overnight. Also, as the inheritors of the older generation continue to die, no one after the shadow puppet crafts and performances seriously threatens the inheritance and development of this folk art. The development of the times has allowed various technologies to appear in our lives at an incredible speed. Things that could only be imagined before have become reality under the current rapid development of technology [13-18].

And AR technology is undoubtedly one of the best. It is a relatively new technology at present, and there is still a lot of room for development. The characteristics of AR technology do determine whether it can be used in the protection of intangible cultural heritage. Shine. At present, this technology can be used in a variety of ways to protect intangible cultural heritage. AR superimposes a virtual dimension on the display. Through digital collection, restoration and reproduction, display and dissemination, it adds to the digital protection of cultural heritage. More possibilities, let the cultural

inheritance glow with new vitality. As mentioned in the three issues of protecting intangible cultural heritage, modern people are pursuing advanced things, but forget to protect the very important intangible cultural heritage. Moreover, there is about to be a fault in the professional talents in this field. Only a very small number of young people. People are willing to engage in this type of industry. I think if these two points are combined, that is, the combination of AR technicians and the protection of intangible cultural heritage, it will better solve the first problem [19-24].

2. THE PROPOSED METHODOLOGY

2.1 The Digital Modeling Technology

At present, the protection of intangible cultural heritage has been widely concerned and valued by academia. However, as far as the protection of material cultural heritage products of folk arts and crafts is concerned, there is still a lack of comprehensive and in-depth investigations, data collection, and research on diversified protection methods. There are relatively few researches on the protection methods of each type of intangible cultural heritage. These products reflect the aesthetic taste and thoughts and feelings of the working people in our country, and have profound traditional cultural connotations and aesthetics. The protection methods of traditional intangible cultural heritage products are mainly collection, recording, sorting, filing, preservation, and research of intangible cultural heritage products. In addition, it uses traditional media to establish a database and a special museum, organize and record written materials, classify pictures and physical materials, and preserve relevant information for intangible cultural heritage research and protection; at the same time, it publishes related books and photographs of various types.

The archives of intangible cultural heritage are publicized to the public through traditional media such as television and radio[2]. The traditional form of intangible cultural heritage protection requires a lot of material resources, and the publicity is small, and the protection effect is low. It can be seen that it is a very low-carbon protection method. In recent years, the protection of my country's intangible cultural heritage has mainly carried out a series of cultural content integration and innovation from the aspects of system construction, publicity and display, and personnel training, in order to enhance the modern perception of traditional culture or skills, and improve the quality of intangible culture or products. Market Competitiveness. Since my country established the "Intangible Cultural Heritage Protection Law" in 2006, the State Council and the General Office of the Ministry of Culture have issued a series of "intangible cultural heritage" protection documents. The construction of intangible cultural heritage information database includes: storage system, description system, data processing integration system, retrieval system, backup system and database security and sharing, etc., using network technology, multimedia technology, document retrieval and other technologies, combined with mainstream Internet B/S technical structure, using the constantly mature new including the "Opinions on Strengthening the Protection of Intangible Cultural Heritage" and "Further Increase "Notice on support for non-genetic inheritors to carry out transmission activities" etc. These documents start from the perspective of the excavation.

2.2 The Intangible Cultural Heritage Protection

Develop digital information acquisition technology for intangible cultural heritage, multimedia virtual scene modeling technology, and virtual scene coordinated display technology to enable users to contact cultural relics at zero distance, realize complete interaction between users and cultural relics, and restore the original appearance of cultural relics through information visualization technology , Carry out virtual cultural relic display and unearthed environment simulation display, augmented reality technology, realize the perfect superposition of existing ruins, relics and original appearance, and display the historical stories behind the cultural relics. Use virtual reality technology, computer graphics and image processing technology, and multimedia technology to collect and organize data at the archaeological site to form a multi-dimensional data model of the archaeological site, thereby simulating the virtual excavation process, and conducting archaeological teaching and the pre-virtualization of real archaeology Experiments reproduce the process of archaeological excavation in an all-round, multi-faceted and vivid manner.

Using intangible cultural heritage sound, image retrieval technology and computer-aided design system, through the integration of 3D imaging, image processing, reverse engineering and other cutting-edge technologies in information visualization technology, the cultural relics are scanned in three dimensions to realize the one-dimensional and two-dimensional information of cultural relics. Full records of three-dimensional, three-dimensional and even multi-dimensional information. In the digital age, the combination of museums and digital technology enables people to browse the fine collections of museums around the world at home and without leaving home, and enjoy 3D immersive visits and exhibitions. The digital museum has undoubtedly expanded the space and means of museum display, and allowed the end of the exhibition to survive forever. Professor Chen Jianxian, deputy director of the Intangible Cultural Heritage Protection Center of Central China Normal University, said, "The number of Chinese netizens is huge, and the digital museum' helps more people quickly understand intangible cultural heritage." Domestic digital museums are relatively mature. "Forbidden City" and "Digital Dunhuang". At the same time, local cultural databases in various ethnic regions are also under active construction, aiming to collect intangible cultural heritage materials scattered among the people.

Inheritance and development of intangible cultural heritage, and carry out the recording, preservation and promotion of intangible cultural heritage. In August 2011, Foreign Languages Publishing House released the e-book application of "Traditional Folk Art".

2.3 The Application of Digital Technology in the Protection of Intangible Cultural Heritage

Based on the iPad tablet computer IOS3.2 system. At present, there are only a few science and technology museums is stored in the device in the form of data alone, it will lose its original color, but if it is combined with AR technology, its visual effect, degree of restoration and other aspects are relatively perfect. Augmented reality technology the biggest advantage in the protection of intangible cultural heritage is that it has a very high degree of restoration, and it will not be

lost or even lost in the process of normal circulation of intangible cultural heritage.

In addition, the emergence and development of digital technology and museums in China that have virtual display terminals of certain folk art or intangible cultural heritage in individual regions. However, these display devices have large limitations and small applications, which restrict the inheritance of intangible cultural heritage. And protection cultural heritage storage, display, publicity and education, but also has the legitimacy and possibility of internalizing intangible cultural heritage in its own way. We combine the two so that the experiencer can intuitively feel the beauty of intangible culture, and at the same time, the experiencer in this way can also feel the interest of these intangible cultural heritage.

For the recording of the singing of Huaxian shadow puppet theater, digital technology has just played its irreplaceable advantage. There are two types of shadow puppet singing, Wanwanqiang and Meihu, which are popular in Shaanxi, Gansu, Qinghai and other places. Wan wanqiang belongs to the banqiang body, and its tone is divided into flowery, flat, and crying. The tones are soft and soft, elegant and clear, delicate and euphemistic.

3. CONCLUSIONS

Applying digital modeling technology to the protection of intangible cultural heritage, theoretically speaking, this will form a digital communication theory for the protection and promotion of intangible cultural heritage, providing a new way for the protection of intangible cultural heritage at the same time, it expands the service space of digital modeling technology. From the content level, the establishment of a digital information database of intangible cultural heritage based on digital modeling technology and the construction of a virtual digital museum with interactive functions conform to the requirements of the development of the information age. From a technical perspective, for the application of digital modeling technology, it demonstrated reverse engineering technology for intangible cultural heritage, three-dimensional rapid modeling technology.

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5. REFERENCES

[1]The influence of digital technology on the teaching of non-heritage cultural and creative design——Comment on "Digital Modeling Foundation-"Intangible Cultural Heritage" Digital Application"[J]. Chinese Journal of Education, 2020(3):140-140.

[2] Zhang Ruixue. Research on the Characteristics of Plastic Art and Digital Protection of Matouqin in Inner Mongolia[D]. Inner Mongolia Agricultural University, 2019.

[3] Wan Qing. The advantages and methods of digital animation technology in the protection of intangible cultural heritage[J]. Fine Arts Literature, 2019(4).

[4] Shen Qiang. The role of digital media technology in promoting intangible cultural heritage[J]. Media Forum, 2019, v.2; No.32(08):44-46.

[5] Liu Min. On the possibility of digital technology in the protection of intangible cultural heritage [J]. China New Telecommunications, 2019, 021(003):47.

[6] Zong Chuanyu. Research on the Innovative Application of Digital Animation Technology in the Protection of Intangible Cultural Heritage[J]. Grand View of Fine Arts, 2018, 000(012):116-117.

[7] Yang Fan, Li Guoping. The application of digital technology in the protection of intangible cultural heritage from the perspective of traditional agricultural culture——Comment on "Digitalization of Intangible Cultural Heritage"[J]. Chinese Journal of Tropical Crops, 2020, v.41(10): 220-220.

[8] Shang Jianjun. Some thoughts on the digital protection of intangible cultural heritage [J]. Literature and Art Life·Wenhai Yiyuan, 2020, 000(003):151.

[9] Wu Pengfei. Research on the development and survival strategy of shadow puppetry in southern Anhui based on the perspective of digital technology[J]. Social Science Journal of Jiamusi University, 2019, 037(003):165-168.

[10] Wang Guan. Research on the Digital Design Method of Tourism Cultural and Creative Products from the Perspective of Intangible Heritage——Taking the design of Yuefei boxwood carving cultural and creative products of Yuewang Temple in Hangzhou as an example [J]. Microcomputer Information, 2019, 000(024): 90-91,93.

[11] Liao Yuting, Mou Yanrui. On the digital protection of Liangshan Yi embroidery[J]. Cultural Industry, 2020(4):85-86.

[12] Yang Ting. The Innovative Application of Han Opera Character Modeling in Digital Commercial Illustration Design [D]. Anhui University, 2018.

[13] Zhao Ran. The Spread of Folk Art in the Context of Media Fusion ——Taking Shadow Puppet Art as an Example[J]. Art Research, 2019, 82(01):161-163.

[14] Qi Zeyu. The display of technological innovation on my country's intangible cultural heritage——and on the development of digital museums in China[J]. Border Economy and Culture, 2018(4): 105-108.

[15] Xiaona Ma, La Tu, Ying Qing Xu. The status quo of digital development of intangible cultural heritage[J]. Scientia Sinica Informationis, 2018, 49(2).

[16] Zhu Jingyi, Fang Chen, Meng Qinglin. Application of AR technology in digital promotion of intangible cultural heritage[J]. Yihai, 2018, 000(004):111-113.

[17] Qing Jiahui, Li Meixian, Zhao Zishu. The application of big data and digital technology in the protection of intangible cultural heritage——Taking Huaihe River Basin Huagu Lantern Art as an example[J]. Digital World, 2019(8).

[18] Zhai Jiandong. The application of digital images in the protection of intangible cultural heritage[J]. News Research Guide, 2020(16).

[19] Li Qian. Research on the status quo and countermeasures of the digital protection of the intangible cultural heritage of the Li nationality in Hainan[J]. Taste Classics, 2020(10).

[20] Wang Caiyun. Research on the Digital Protection and Dissemination of Manchu Paper-cutting Art[J]. Culture Monthly, 2018, 000(009): P.149-149.

[21] Liu Yu. Analysis of Digital Display and Inheritance of Intangible Cultural Heritage——Taking the Art of Lantern and Shadow in Bazhong as an Example[J]. Daguan, 2020, No.229(11):89-90.

[22] Wang Guan. Research on the Digital Design Method of Tourism Cultural and Creative Products from the Perspective of Intangible Heritage: A Case Study of the Design of Yuefei Boxwood Carving Cultural and Creative Products of Yuewang Temple in Hangzhou[J]. Science Technology and Innovation, 2019, No.144(24):96-97+99.

[23] Guo Chenhui. Research on the Cartoon Image Design of Jin Opera Characters in the Digital Background[J]. Industrial Design, 2019, 000(010):122-123.

[24] Li Juan, Liu Junzhe, Shao Anning, et al. The cultural inheritance and information protection concept of Nanjing's traditional Qinhuai lanterns[J]. Drama House, 2019, 302(02):235-236.

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Practice and Discussion on Teaching Reform of Modern Control Theory Course

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Abstract: The rapid development of knowledge economy poses a challenge to higher education. To cultivate high-quality innovative talents, colleges and universities must carry out educational reforms and improve teaching quality. Modern control theory is the core course of automation major. In view of the characteristics of this course, such as its strong theory and relatively abstract nature, this paper focuses on teaching structure, teaching system, teaching content, teaching methods, bilingual teaching and the construction of teaching materials, and the author optimizes teaching content. And the selection of teaching materials, the reform of teaching methods, the strengthening of the connection with practical problems, the addition of experimental links, the reform of examination methods, and the combination of teaching and scientific research to discuss the reform ideas of this course.

Keywords: Teaching Reform, Modern Control Theory, Practice and Discussion

1. INTRODUCTION

Modern control theory is one of the compulsory courses for undergraduate majors in automation. It is a follow-up course following automatic control theory. It is also the basis for graduate students to study courses such as optimal control, robust control, and linear system theory. It is very important in teaching reform. The modern control theory course expresses the actual system in the form of a mathematical model, and then analyzes and processes the system parameters and motion trajectory according to the mathematical model. The concepts are relatively abstract and difficult for students to grasp.

To allow students to better grasp the knowledge of this course and cultivate students' innovative consciousness, innovative ability and comprehensive quality, the course is optimized from the content of teaching and the selection of teaching materials, the reform of teaching methods, the strengthening of the connection with practical problems, the increase of experimental links, the reform of examination methods, teaching and scientific research are discussed. In addition, the content of the course must be systematic and a complete system, including the whole process of control system analysis and synthesis. All the content is a part of the system, so that students can understand the status and function of the internal subject taught by the teacher. Forming a systematic knowledge system is not only conducive to memory, but also conducive to cultivating a systematic way of thinking.

The stability theory in modern control theory belongs to the content of ordinary differential equations, so the relevant theories of ordinary differential equations should be properly supplemented while teaching. In the whole teaching process, while teaching the course content, strengthen the training and training of students' logical thinking ability in a purposeful and targeted manner. research on control issues. Teachers should actively guide students to master the inner connection between knowledge points, not just stay on the surface. Under the limitation of only 32 class hours of teaching, it is difficult for teachers to instill textbooks into students "completely" and "extremely delicate".

We must "reduce the branches and strengthen the poles", select the teaching content, emphasize the basic theory, and highlight the teaching points in accordance with the requirements of the teaching syllabus stipulated by the "Automation Major Teaching Guidance Sub-Committee in Colleges and Universities". For example, for the chapter "state space model", its most basic content state, state space, state space description of linear time-invariant system, establishment of state space model of physical system, relationship between state space description and transfer function (matrix). Transformation relations, linear changes, etc. should be explained thoroughly, and some cumbersome and impractical content can be appropriately reduced. Highlight the basic theories, basic laws, and content that are beneficial to engineering practice, because they are the essence, the core, and have a long-term effect.

Due to the large number of matrix operations in modern control theory, it is easy to cover up the engineering background of its state-space method, and it is easy to lead students to think that this course is only to solve mathematical problems, and has nothing to do with system control, so they lose interest in learning. Currently, the teacher is required to introduce the relevant engineering background while explaining the concept of physics. For example, use MATLAB simulation software to simulate the control process of the system, verify the physical concepts in the teaching process, combine theory with practical problems, activate the classroom atmosphere, improve students' interest in learning, and let students understand the importance of learning this course. After the teaching content is optimized and designed, an effective teaching method is needed to guarantee the teaching content. There are various modern teaching methods, and it is very important to find a teaching method that suits the needs of teaching content, is popular with students, and has good teaching effects.

2. THE PROPOSED METHODOLOGY

2.1 Reform the teaching structure and improve the teaching system.

In terms of teaching methods, according to the arrangement of the course content, the author adopts a variety of teaching methods such as the combination of multimedia and traditional blackboard teaching, inspiration and discussion, teacher-student communication, and exercise guidance to

improve students' enthusiasm and initiative in learning and improve teaching effects. For the key content, such as how to transform the given state space expression into the form of Jordan canonical form, how to calculate the state transition matrix by various methods, how to judge the controllability and observability of the given system, how to systematize into energy the standard type of controllability and observability, how to decompose the system according to the controllability and observability, the concept of stability and the method of discrimination, the conditions and specific methods of pole configuration, and the design method of the full-dimensional state observer are taught in detail.

The teaching method that stimulates students' thinking ability is adopted, so that students can explore the correct answer to the question and find the inevitable result of logic. For example, in the section on the definition and analysis of controllability and observability of a control system, in general textbooks, the abstract definition is first given directly in a mathematical way, and then its criterion is explained. We believe that it is difficult for students to memorize and accept the concepts of controllability and observability given by pure mathematics. Because modern control theory only includes the basic concepts and methods of control theory, it does not introduce the latest research trends and research directions of control theory. Therefore, when teaching, the latest research trends at home and abroad are combined with teaching content to introduce to students and improve students' interest in learning. And deepen the understanding of control theory, and properly introduce academic conferences in domestic and foreign control circles to students, such as CDC, CCDC, etc., which not only improves students' scientific research knowledge Enthusiasm broadens knowledge.

With the modernization of school teaching equipment, multimedia teaching methods have emerged. Multimedia teaching has the characteristics of intuition, vividness, and image. It can use slides or animations to teach some content that is difficult to describe in language in the classroom, which not only improves the efficiency, but also strengthens students' understanding and memory of the teaching content. For courses with a lot of theory and formulas, it is necessary to pay attention to the organic combination of multimedia teaching and traditional blackboard teaching in the teaching process, to give full play to their respective advantages and improve the teaching effect.

In terms of teaching methods, we must pay attention to intuitive teaching and actively apply modern teaching methods such as multimedia courseware and audio-visual teaching. Because these modern teaching methods have the characteristics of combining pictures and texts, sound, and image, and have vivid appeal, they can stimulate students' interest in learning modern control theory, mobilize students' initiative in learning, and thus achieve good teaching results. Using modern teaching media to make abstract concepts semi-concrete and concrete things semi-abstract makes teaching and learning easier. It is easy to turn to concrete visualization and abstract conceptualization. Therefore, we introduce the MATLAB software tool of control system analysis and synthesis in time to make it serve CAI teaching.

2.2 Using Negative Feedback Ideas in Teaching Methods to Achieve Teaching Objectives and Improve Teaching Effects

For example, for system synthesis based on the state-space method, general textbooks only explain how to design controllers, and do not verify the control effects. The use of multimedia teaching can make up for this defect. Class teachers can conduct classroom discussions on a practical engineering problem. This kind of discussion-based learning can stimulate students to think proactively, and it is also an integral part of grades, allowing students to actively participate in it. In addition, students who are diligent in thinking and love scientific research can participate in the scientific research work of teachers, cultivate students' scientific research ability, and lay the foundation for future graduation design work. In the process of lesson preparation, according to the content of the course and combined with your own scientific research practice, carefully design problems, consider possible solutions and the advantages and disadvantages of each solution.

Firstly, the questions are given, and then the students are inspired to think independently and propose their own solutions. Group by scheme. Similar plans are divided into groups. Members in the group conduct in-depth discussions and further refine their own solutions. Then each group arranges a representative to give a speech. Finally, the teacher summarizes and improves theoretically, pointing out the problem. The theoretical knowledge involved, and its application methods will answer the questions raised by the students. To achieve the goal of quality education and guide students to participate in scientific research-based learning, reform attempts should be made to the assessment methods of modern control theory, and the proportion of scientific research-based learning assessment should be increased. For example, the overall evaluation score of the assessment is 100 points in total. Among them, the final exam focuses on the flexible use of the basic concepts and basic theories of the textbook, and the test paper score accounts for 40% of the overall evaluation score.

We not only pay attention to the quality of classroom teaching, but also pay attention to many links such as experimental guidance, homework correction, exercise classes, extracurricular Q&A, etc., and adjust the teaching syllabus and determine the teaching plan. In the classroom teaching, students should not be instilled unilaterally, and students should not just accept passively. Teachers and students should fully interact. And according to the learning effect of students, the teaching plan and classroom teaching are revised in time or the teaching syllabus is fine-tuned, to realize the tracking of teaching goals and finally improve the teaching quality. "Modern Control Theory" is not only strong in theory, but also strong in practice. Only through practice can students deepen their understanding of theoretical knowledge, truly master the methods of control system analysis and design, and cultivate analysis, problem-solving abilities, and innovative thinking ability.

The author explores the course practice through the combination of experiment and scientific research training. In terms of experiment, it mainly sets up open experiments. Students are required to independently design experimental plans according to the contents of the experimental course and carry out experimental operations. The experiment does not require completion within the specified time. Students can constantly modify and improve the experimental plan according to their own understanding. In this way, the enthusiasm and initiative of students can be stimulated, their creativity can be brought into play, and talents with real innovative practical ability can be cultivated. Classroom and daily grades mainly examine students' homework (accounting for 10% of the total score), attendance (accounting for 10% of the total score), and classroom learning (accounting for 10%

of the total score), which account for 30% of the total score; The assessment results account for 3O9, 5 of the total assessment results.

3. CONCLUSION

At present, the level of automation is changing with each passing day, so that control theory has been greatly developed in production and life, and higher requirements are put forward for further improving the effect of system automatic control. Therefore, how to strengthen the teaching effect of "Modern Control Theory" in the teaching process, letting students use what they have learned has become a major issue. Focusing on the teaching structure, teaching system, teaching content, teaching methods, student performance evaluation mechanism, bilingual teaching, and teaching material construction, etc., this paper conducts extensive and in-depth research and discussion on improving the teaching quality of the "Modern Control Theory" course effective education reform measures.

4. REFERENCES

[1] Zheng Zhiqiang, Weng Zhi. Exploration on Teaching Reform of "Modern Control Theory" Course [J]. Laboratory Research and Exploration, 2013(11):381-383.DOI:CNKI:SUN:SYSY.0.2013-11-105.

[2] Wang Bin, Li Bin. "Modern Control Theory" teaching reform and practice [J]. China Electric Power Education, 2013 (10). DOI: 10.3969/j.issn.1007-0079.2013.10.031.

[3] Tan Yuegang, Chen Guoliang. Exploration and Reform of "Modern Control Theory" Course Teaching for Full-time master's degree Graduates[J]. Degree and Graduate Education, 2010(8):4.DOI:CNKI:SUN:XWYY.0.2010 - 08-005.

[4] Zhu Yonghong, Li Manhua, Wang Jianhong, etc. Reform and practice of teaching mode of "Modern Control Theory" course for graduate students based on MATLAB [J]. Journal of Jingdezhen Higher Education, 2014, 000(006):13-15.DOI:10.3969/ j.issn.1008-8458.2014.06.006.

[5] ZHAI Junyong, Zhai Junyong. Modern Control Theory Course Teaching Reform and Practice [C]//National Automation Education Academic Annual Conference. Chinese Society of Automation; Ministry of Education, 2013.

[6] Gao Liqun, Yang Shu, Han Jie, etc. Practical Thoughts on Undergraduate Teaching Reform——Taking "Modern Control Theory" as an Example [J]. Liaoning Education Research, 2006.

[7] Wu Bo, Zhan Xisheng. Discussion on the teaching reform of modern control theory courses in normal colleges [J]. Journal of Hubei Normal University: Natural Science Edition, 2017, 37(2):4.

[8] Shu Xinmei, Wang Jun. "Modern Control Theory" Bilingual Teaching Practice and Thinking [C]//Proceedings of the 6th National High School Electrical Engineering and Automation Specialty Teaching Reform Seminar (Volume 1). 2009. DOI:ConferenceArticle /5aa02cc2c095d7222068d0cb.

[9] Yang Xiyin, Yu Li, He Defeng. Teaching reform and practice of the course "Modern Control Theory" [C]//Chinese Society of Automation. Chinese Society of Automation, 2011.

[10] Li Shurong. Course Reform and Practice of Automatic Control Theory [J]. 2001 China Automation Education Academic Annual Conference, 2007.

[11] Zhang Baolin, Fang Qingxiang, Cao Feilong. Thoughts on the Teaching Reform of "Modern Control Theory" Course for Mathematics Majors [J]. Science and Education Wenhui (late issue), 2010.DOI:CNKI:SUN:KJXH.0.2010-12- 021.

[12] TANG Chao-ying, JIANG Bin, QI Rui-yun. A Preliminary Study on the Research Teaching Method of "Modern Control Theory" Course [J]. Journal of Electrical and Electronic Teaching, 2018, 040(006):83-85.

[13] Chen Feng. Discussion on the teaching reform of "Modern Control Theory" under the CDIO mode [J]. Experimental Science and Technology, 2012, 010(003):69-70,132.

[14] Zhang Hong, Zhang Yuhui, Chu Zhuang. "Modern Control Theory" Course Teaching Reform and Practice Research [J]. Science and Technology Information, 2018, 16(3):2.DOI:CNKI:SUN:ZXLJ.0.2018-03- 118.

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Example Analysis of The Application of Chinese Elements in Modern Clothing Design

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Abstract: With the continuous development of my country's modern social economy, all walks of life in social production have shown unprecedented economic strength. At the same time, my country's clothing design industry has also shown vigorous vitality and plays an important role in my country's economic construction. To fully demonstrate the special significance of our country's traditional costume elements, fashion designers should fully understand and tap the precious value of our country's traditional costume elements and look for the main design elements and artistic inspiration of traditional costumes. With the continuous development of my country's modern social economy, social production all walks of life in China have demonstrated unprecedented economic strength. At the same time, my country's clothing design industry has also shown vigorous vitality and plays an important role in my country's economic construction. To fully demonstrate the special significance of my country's traditional clothing elements, fashion designers should fully understand and tap the precious value of my country's traditional clothing elements, find the main design elements and artistic inspiration of traditional clothing,

Keywords: Example Analysis, Chinese Elements, Modern Clothing Design

1. INTRODUCTION

In the process of social development, my country's fashion design continues to show new ideas of fashion, which shines in the world and greatly promotes the prosperity and development of the fashion design industry. With the continuous improvement of people's consumption level and the continuous change of consumption concepts, people have put forward higher requirements for material and spiritual life. Due to the existence of many popular clothing elements in my country's long traditional culture, extracting these elements and fully applying them to modern clothing design can play a major role in traditional clothing elements, effectively promoting the promotion and development of my country's traditional culture, as well as my country's clothing industry. The development of China's clothing industry will improve the status of my country's clothing industry in the world and strengthen international art and cultural exchanges.

Today, with the gradual advancement of the globalization process, international cultural exchanges are becoming increasingly close. Traditional Chinese culture with profound cultural heritage and historical origins is gradually attracting the attention of the design community with its unique cultural atmosphere. Western designers They also set their sights on the east, and they gradually discovered that there was something they dreamed of here. As a result, the oriental trend swept the world, Chinese traditional cultural elements became the darling in the eyes of designers, and everything full of Chinese elements became synonymous with fashion. Color has a long history of development in China. It was first dominated by natural minerals and plant fuels. Different colors have different connotations.

For example, in the traditional Chinese color concept, yellow represents nobility, magnificence, and glory, and red represents enthusiasm, fierceness, and bravery. These traditional color concepts are related to classical philosophical thoughts and are the direct expression of people's thinking consciousness. According to the analysis of Chinese clothing colors, the color originated from the traditional "five colors", namely blue, yellow, red, white, and black. With the development of raw materials and technologies, vermilion, dark green, navy blue, bright yellow, gold, Silver, purple, scarlet, and other colors are widely used in clothing colors, making the charm of silk shine internationally. Linen and cotton printed fabrics are ancient traditional fabrics in my country. They are breathable, hygroscopic, and simple, and are widely used in the design of casual clothing. Clothing designed with this fabric is full of unique personality because of its strong folk characteristics.

Some designers use folk cotton cloth or modern cotton cloth to show the classic and simple beauty and use simple cotton and linen as the main design materials to add details and innovative designs, creating a group of fashion brands that are full of fashion and unique national characteristics, such as 'Seven Colors' "Ma", "Bo", "Jiangnan Commoner" and so on. These are an important part of traditional Chinese clothing, but Chinese traditional clothing is not limited to this, and Chinese traditional clothing culture has a very broad scope. For example, Hanfu is an important part of Chinese traditional clothing culture The important part of it has a variety of forms in the five thousand years of Chinese inheritance, reflecting a certain degree of cultural inheritance and systematization, following the law of traditional cultural development, and inheriting the richness of China's traditional clothing culture.

2. THE PROPOSED METHODOLOGY

2.1 The Value of Chinese Traditional Cultural Elements in Modern Fashion Design

Because many designers lack the overall cognition and grasp of traditional Chinese culture, they cannot properly interpret Chinese elements in the modern fashion environment, resulting in many superficial designs, which is not conducive to the development of modern fashion design. It also destroys the integrity of Chinese traditional culture and affects the

proper status of Chinese design in Western mainstream design. Therefore, if we want to deal with the relationship between traditional elements and modern popular design, we need to go deep into the philosophical level of Chinese traditional culture to study, fully understand its spiritual connotation, absorb, and decompose it, and be able to compare eastern and western cultures. Differences can only design clothing art works full of oriental charm.

Patterns are the icing on the cake for clothing and are also the main element to show the characteristics of clothing. For example, in the Zhou Dynasty, twelve-chapter patterns were painted or embroidered on the manful, showing that people gradually paid attention to the artistic expression of clothing. In the Han Dynasty, clothing was decorated with overlapping and winding, interspersed up and down, and four-sided extensions, forming lively cloud, bird and dragon patterns, and the patterns more prominently showed its artistic appreciation value. Influenced by sketches of flowers and birds, the patterns of clothing patterns in the Song Dynasty tended to be realistic and rigorous in composition, and tended to be human figures, flowers, animals, and geometric patterns. Various patterns were varied. Color is the most resounding visual language in clothing. Can fully reflect the personality of the wearer. Different colors convey different emotions, such as red represents enthusiasm, bravery, beauty, and enthusiasm, and yellow symbolizes wealth, glory, and nobility.

The oriental traditional color concept is derived from the unique oriental classical philosophy, which lies in a deeper exploration of the world beyond the scientific thinking system. The mainstream of Chinese clothing colors originates from the traditional five colors and is the inheritance and development of national traditional colors. In the past ten years, China's fashion design level has been greatly improved, and a group of internationally influential fashion designers have emerged, which has greatly promoted the overall level of Chinese fashion design. These outstanding fashion designers All designers have one thing in common in modern clothing design, that is, they can make full use of traditional Chinese clothing elements in their designed works. Drawing on traditional cultural elements is not simply copying them mechanically. We need to inherit and recreate traditional cultural elements, which includes the transformation of cultural forms and the re-expression of cultural connotations, rather than simple copying.

A good designer must be able to resonate with the traditional cultural elements and symbols. He can dig out its essence from the original traditional culture. All these can be perfectly integrated together. Such works are clear and appropriate, in line with the trend of the times, so they can be accepted by consumers. Chinese red is an element with Chinese characteristics. Because of its good meaning, it has been applied in various fields. Chinese red elements in fashion design have emerged in an endless stream in recent years. For the Chinese, Chinese red represents auspiciousness, joy, success, reunion, blessings, etc. The Chinese people have a special affection for Chinese red, which is a deep-rooted cognition. If it is a big occasion, red must be used Enhance the atmosphere.

2.2 Innovative application of traditional cultural elements

Some fashion designers have grasped this rule, applied Chinese red in clothing design, and designed strong-colored clothing to satisfy people's special affection for Chinese red, highlight national characteristics and reflect clothing personality at the same time. In terms of pattern and color, Western designers not only stop at the simple copy of dragon and flower group patterns in the past, but further dig out paintings with more Chinese humanistic flavor, such as Chinese ink painting. In 2005, Dior's designer painted in white, Black flowers are painted on the fabric with splash ink, which seems random, but is actually very interesting. In order not to look dull, the designer also added red flower embellishments to the fabric, and the clothing style is also mainly simple, with only a few thin wrinkles at the waist, giving the dress of splashed ink fabric an elegant look.

The designer fully embodies the use of color elements of traditional Chinese clothing in modern clothing design, which is in line with international trends, effectively enhances the depth and height of my country's modern clothing design concepts and demonstrates traditional culture with Chinese characteristics. For example, through the application of festive Chinese, red and elegant yellow to achieve artistic expression, at the 2008 Beijing Olympic Games, people noticed that the Chinese athletes' team uniforms were red and yellow, which showed the meaning and spirit of our traditional culture and made the eyes of the audience brightened. Horizontal lines on clothing make people look plump and burly, while vertical lines on clothing make people look slim and slender.

Based on people's illusion, designers give full play to their creativity. When designing men's clothing, horizontal lines are fully used on the shoulders, back, and waist to show the man's tall and burly body. On the contrary, when designing women's clothing, make full use of vertical lines to show a woman's slender figure. Through a simple point, the desired effect is achieved. People's pursuit of fashion has not stopped. Wedding clothing should not only satisfy festive features, but also have a sense of fashion. Therefore, many designers use Chinese red in the design of wedding dresses and use red to reflect enthusiasm and festive feelings, combining different shapes and fabrics to reflect the characteristics of wedding dresses, incorporating fashion elements into the design, so that wedding dresses can meet people's different needs, while embodying practicality and fashion sense, and meeting the basic requirements of modern clothing design. Chinese characters the artistic connotation embodies the essence of Chinese traditional culture.

The pattern of Chinese characters has the characteristics of graphic design. In the field of clothing pattern design, it has a wide application space. As a kind of clothing decoration style, it can better reflect the national characteristics of clothing. In the process of specific application, a variety of design thinking methods are adopted, combined with flexible design methods and modeling methods, to organically combine modern clothing design concepts with traditional Chinese character art connotations.

3. CONCLUSION

Traditional clothing culture has shown certain value in modern clothing design in my country, and people can deeply analyze the relevant elements in traditional clothing culture to effectively discover the essence of traditional culture, which fully reflects the profound cultural heritage of Chinese traditional clothing. When Eastern culture and Western culture meet, Chinese traditional clothing and Western clothing systems blend together, making the clothing industry pay more attention to the essence of ancient Eastern culture, innovate design concepts, and make full use of Chinese elements while absorbing foreign elements, so that Chinese elements enter fashion design and people's daily life, so that

traditional culture can last forever and maintain vitality, let Chinese clothing go to the world stage, and let Chinese elements enter the vision of people all over the world.

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5. REFERENCES

[1] Li Jun, Zhang Yi, Li Quanming. Case Analysis of the Application of Chinese Elements in Modern Fashion Design [J]. Textile Herald, 2010(4):3.

[2] Liu Baobao. Case Analysis of the Application of Chinese Elements in Modern Fashion Design [J]. Chemical Fiber and Textile Technology, 2021(008):050.

[3] Ge Yingying, Ma Qingrui. Case Analysis of Chinese Traditional Elements in Modern Fashion Design [J]. Tomorrow, Fashion, 2016(16): 2.

[4] Wang Liping. On the Application of Chinese Traditional Cultural Elements in Modern Fashion Design [D]. Qilu University of Technology, 2012.

[5] Wang Ke. On the Application of Chinese Elements in Modern Fashion Design [J]. Jiangsu Textile, 2018, 000(007):60-61,63.

[6] Sun Yun. The application of Chinese traditional clothing elements in modern clothing design [J]. Art and Design (Theory), 2008.

[7] Wang Xinying. Research on the design of men's cufflinks [D]. Soochow University.

[8] Feng Mengchan. The Application of Chinese Elements in Fashion Design [J]. Popular Literature and Art: Science Education Research, 2014(002):000.

[9] Wu Chunsheng. The application of Chinese traditional elements in brand clothing design [J]. Art Technology, 2014(9): 2.

[10] Han Hui. The Application of Chinese Traditional Cultural Elements in Modern Fashion Design [J]. Art Appreciation, 2015(1):1.

[11] Xu Lili. Application Research of Chinese Elements in Chinese Clothing Display Design [D]. Jiangnan University, 2008.

[12] Yan Fengling. Discussion on the Application of Chinese Elements in Modern Fashion Design [J]. Yalu River (Second Half Month Edition), 2015, 02(No.669):376-376.

[13] Li Rui. A brief analysis of the color characteristics of Manchu costumes and the application of clothing design [C]// Academic Seminar on Traditional Colors and Modern Applications on both sides of the Taiwan Strait. 2010.

[14] Fu Bingbing. Talking about the Application of Chinese Elements in Modern Fashion Design [J]. Modern Business, 2010(36): 1.

[15] Hou Suke. Talking about the Application of Chinese Elements in Modern Fashion Design [J]. Chinese Literature and Artists, 2018(5): 1.

[16] Shi Tianliang, Cheng Bingying. Analysis of the application of Chinese elements in fashion design [J]. Modern Silk Science and Technology, 2015, 30(5):3.

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Parametric Design and Simulation Analysis of Electronic Equipment Structural Parts under the Background of Game Testing Algorithm

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Abstract:In this paper, the elastic-plastic finite element numerical calculation and parametric design method are applied. The parameterized design of the finite element calculation of the structure of the electronic equipment connector is carried out, and the parametric finite element simulation system of the connector structure is developed based on the ANSYS platform. The principle and method of the parametric design system PDA and the parametric library tool PDS. On this basis, the parametric design of shipboard electronic equipment structural parts and the realization method of building a database are expounded, and specific application examples are given. to realize the spatial modeling of the circuit. Using this general program, the circuit space model can be easily modified without re-modeling with the interface.

Keywords: Parametric Design, Simulation Analysis, Electronic Equipment Structural Parts, Game Testing Algorithm

1. INTRODUCTION

In the structure of aircraft, mechanical fasteners such as riveting or screwing are typical key components [1]. As we all know, under the action of various complex loads and environmental factors of the aircraft, most structural cracks occur on the edge of the nail hole [2], and some cracks are still critical and fatal. Whether it is foreign experience or practical application, whether it is hardware or software, the accusation system should be a building block product, and this guiding ideology should be implemented from the beginning of system design [3]. The structural design should also be standardized, modularized and serialized. Standardization is an umbrella term for serialization and generalization. In various products of different models [4], there are quite a few parts that are the same. If these parts are standardized and serialized according to different sizes, the designer can directly select them from the manual [5].

APDL is the abbreviation of ANSYS Parameter Design Language, that is, ANSYS Parametric Design Language. It is a scripting language that can be used to automatically complete conventional finite element analysis [6] operations or establish analysis models through parameterized variables. The user provides the automatic completion of the finite element analysis process. Since it was first proposed by Geoffrey Hinton in 2006 [7], deep learning has been highly concerned by scientific research institutions and industries. Early deep neural network algorithms were mainly used in the field of image classification and recognition. In 2012, AlexNet proposed by AlexKrizhevsky [8], Ilya Sutskever and Geoffrey Hinton reduced the image recognition error rate by 14%. In 2003, Kasparov played against Deep Junior. He fought Deep Junior in six games, Kasparov won the first game, and Deep Junior recovered a point in the third game [9]. In the fourth inning, it was the fifth inning. Then in the sixth game, after 25 rounds, the game became hot, and then, after Deep Junior completed 28.f4, the computer side pulled up. To the surprise of many, Kasparov accepted [10].

Chinese chess has different kinds of pieces. If you distinguish between red and black, then there are different kinds of pieces [11]. If there are no pieces in a certain position, you should also show the situation. The type of chess piece is coded according to the type of chess piece, and it is coded one by one, which represents empty squares [12]. As we all know, signal processing technology not only needs huge storage space to store data and complex calculation to process signals, but also needs to perform real-time signal processing. Processing, reflected on the hardware [13], requires a large memory and a high operating frequency. Compared with other hardware chips, Field Programmable Gate Array (FPGA) has a greater degree of parallelism. The researchers' continuous exploration in the field of low intercept probability technology makes it both in theoretical research and practical application. Great progress has been made [14], and the increasingly complex electromagnetic environment has also made radar designers realize that achieving low interception performance of radar is the mainstream direction of future radar development [15]. If a radar does not have a certain low interception probability performance. Each round of optimization Both include strength calculations and life estimates [16].

Therefore, the improvement of the analysis and calculation method of the connector will greatly improve the efficiency of the design work and produce significant economic benefits [17]. When the finite element method is used to calculate the connectors of the aircraft structure, the following methods are usually used to simulate the connectors. The characteristics of the variable technology are that the advantages of the parameterization technology are retained [18], but fundamental changes have been made in the definition of constraints. Distinguish between shape constraints and dimensional constraints [19], rather than just using dimensions to constrain the entire geometry as in parametric techniques. PDA is an intelligent automatic parametric design system based on graphic understanding developed based on AutoCAD [20]. The purpose of PDA is to use the principle of size drive to make the geometric parameters of primitives with size requirements conform to the corresponding dimensions. The parametric pedal user program is written to realize the whole process of finite element analysis, that is, the

establishment of parametric CAD model [21], parametric mesh division and control, parametric material definition, parametric load and boundary condition definition, parameter Deep learning is also widely used in the field of reinforcement learning [22]. Deep reinforcement learning guides the self-growth of artificial intelligence, and has achieved remarkable results in both theory and application [23].

2. THE PROPOSED METHODOLOGY

2.1 The Game Testing Algorithms

In 2013, the DeepMind team proposed the DeepQ-Network (DQN) framework that uses deep reinforcement learning to solve Atari games [24], and used deep reinforcement learning for the first time to learn game policies in complex high-dimensional state spaces. Search is a fundamental problem in artificial intelligence [25], is an indispensable part of reasoning, it directly affects the operating efficiency and performance of artificial intelligence systems, so some scientists list it as one of the four core issues of artificial intelligence research [26]. The preset table method is the car, the gun, pawns, and generals use the most common move generation method. Its basic idea is to exchange space for time. In order to save the scanning time for generating moves in the game process, the mover is placed at any position on the chessboard and for all possible distributions of the pieces, the possible capture moves and non-capture moves are given in advance.

The large time width of the LFMCW radar beat signal leads to the speed-distance coupling problem. For the single-slope sawtooth wave LFMCW radar signal, the distance error caused by the coupling problem is more difficult to eliminate. The triangle wave LFMCW signal is the basis of the sawtooth wave LFMCW signal. Compared with the sawtooth wave LFMCW signal, it can well weaken the distance offset phenomenon caused by the velocity-distance coupling problem. Relationship between receiver sensitivity and signal peak power. Therefore, the acquisition of radar low intercept performance must maximize the sensitivity of the radar receiver, reduce the transmit power and increase the time-width-bandwidth product of the signal. The above analysis only gives the influence of the signal time-width-bandwidth product on the low interception performance of the radar from the perspective of the signal waveform, but the effective low interception measures are not limited to this. , the influence of stress concentration is not considered, and the calculation results are conservative; the construction of the model in Method 3 is too complicated, and the contact analysis itself is a highly nonlinear behavior, which requires a lot of solution resources and relies on the user's modeling experience. Sex is also very big.

The process frame of the PDA system is shown in Figure 1 below: The basic process of the PDA system is: for the original sketch input by the user, the rule-based sketch recognition method is used to establish the GCG representation of the graph; the geometric reasoning algorithm is used to process the original GCG.

2.2 The Parametric Design of Electronic Equipment Structural Parts

ANSYS software Although it provides a friendly graphical user interface, once the mesh is divided, if you want to change some operations (such as changing the size of components, etc.), you must remodel the entire circuit. Check the system connections, robots, servos Power on the driver board and other equipment to initialize the core system; (2) The motion controller collects sensor information to complete the power-on self-check, and establishes serial communication with the central control system; (3) The vision system initializes the camera and establishes a connection with the central control system , the computer vision system collects the chess surface information in real time, and encodes and packages the data to the central control system.

Observing the pseudo-code, we can see that if the value cur returned by the algorithm is less than the initial window, it means that the value we are looking for is less than alpha. If the return value cur of the algorithm is greater than the initial window, it means that the value we are looking for is greater than beta. Both the source code and experiments show that the algorithm does not improve the pruning efficiency of the α-β pruning algorithm. In the subsequent search, check the information recorded in the table, if a node to be searched already has a record, just directly Using the recorded results to introduce into the current search, that is, using the permutation phenomenon to reduce the search, belongs to the category of the clipping algorithm. However, in the middle game stage of chess, the permutation phenomenon is not so common, so its main effect is to inspire. The two sections respectively study and analyze the single-cycle LFMCW radar signal. It can be seen that the speed of the moving target is related to the Doppler frequency shift df, and the distance is related to the echo delay and Doppler frequency shift df.

In order to further understand the LFMCW radar beat signal, the above frequency sweep LFMCW radar beat signal is taken as an example. A chirp signal is a relatively easy-to-generate pulse-compressed signal.

2.3 The Parametric Design and Simulation Analysis of Electronic Equipment Structural Parts

ts advantages are: the Doppler tolerance is large, so when the Doppler detuning is not greater than the signal bandwidth, the pulse compression effect of the filter is not affected, but the Doppler detuning and the output compressed pulse main peak delay proportional. How to accurately evaluate the strength of various connecting structures is a very important issue in the whole process of aircraft design, manufacture and service. Due to the complex and diverse configurations of various connection structures and the different connection methods, the cost of using the test method is high, and the failure mode of various connection structures cannot be effectively predicted. Dimensioning of engineering drawings is a direct and natural descriptor of geometry, thus providing a most suitable way to modify geometry.

Thus, changes in dimensioning can be automatically translated into corresponding changes in geometry. Like other large-scale software, ANSYS software not only provides powerful GUI front-end application functions, but also provides a powerful secondary development interface, so that ANSYS can exert powerful functions at various application levels. APDL language is limited A batch language that comes with the meta-analysis software ANSYS, which

provides a powerful tool for parameterized finite element models. Therefore, APDL language is used to implement programming. Obviously, once the hash table is established, it can be used for searching. The given keyword and the hash function used when building the hash table are directly searched in the given table.

Then, since the value of each record key in the set may be in a large range, even when the number of records in the set is not very large. This paper uses the data of 9 sweep cycles as a processing unit, and one cycle The number of sampling points inside is N, and the condition for FPGA to implement FFT transformation is that the number of sampling points must be equal to the power of 2, that is, 2nN, where n is a positive integer. Since the radar is jammed when the frequency just jumps within the jammer's signal bandwidth, if the radar's agile bandwidth is much wider than the jammer's jamming bandwidth, the jammer will be unable to jam the radar most of the time. The disadvantage is that the large peak power point of the frequency agile signal is easy to be found.

3. CONCLUSIONS

Based on the game test algorithm, the system is used to calculate and simulate the stress and strain of the connector, which can basically meet the accuracy requirements and greatly save the system overhead. The calculation efficiency is improved, and it can be applied to the calculation of connectors of complex structures. Improve the efficiency. Make the application of ANSYS software in the field of electromagnetic field analysis of power electronic devices more universal and universal, so that the universality of electromagnetic field analysis can truly be brought into play.

4. REFERENCES

Zhou Yong, Qu Yanqing. Parametric modeling and mechanical simulation analysis and research of spatial steel structure grid [J]. Railway Construction Technology, 2018(8):5.

[2] Zhang Chongjun, Kang Ning, Cui Wei, et al. The application of simulation technology in the structural design of electronic products [J]. Mingchenghui, 2020.

[3] Zhang Jing. Research on parametric modeling and simulation of rocket fairing separation [D]. 2019.

[4] Tian Jing, Li Xiaofei. Development of parametric modeling and simulation platform for magnetorheological sway damper structure [J]. Journal of Civil Aviation University of China, 2021, 39(1):6.

[5] Zhang Hanbing. Structural design and simulation analysis of carton clapboard automatic packing machine [D]. Jiangsu University, 2020.

[6] Liu Jiang, Gao Dong, Li Tongtong, et al. Research on top-down parametric design method for complex assemblies [J]. Manufacturing Technology and Machine Tools, 2019(10):5.

[7] Feng Huijuan, Miao Qing, Fan Shengqiu, et al. A Modular Parametric Design Method of Industrial Robot Mechanical Structure: CN108839057A[P]. 2018.

[8] Sun Junxiang. Research on 3D parametric design technology of transmission parts [D]. Shenyang Jianzhu University, 2018.

[9] Huang Chenhua, Mao Guisheng. Structural design and simulation research of industrial robot for loading and unloading [J]. 2022(3).

[10] Li Feixiang, Li Yongxiang, Xu Xuemeng, et al. Pitch design and simulation analysis of variable pitch helical structure [J]. Packaging Engineering, 2019, 40(13):214-221.LI Fei-xiang,LI Yong- xiang,XU Xue-meng,TANG Jing-jing,MENG Kun-peng,CHEN Jing.Pitch Design and Simulation Analysis of Variable Pitch Spiral Structure.Packaging Engineering, 2019, 40(13):214-221.

[11] Wu Yilin, Zeng Zhen, Zhang Lingjie, et al. Simulation Model of Harmonic Mode-Locked Photoelectric Oscillator Based on Double Ring Structure [J]. Chinese Journal of Electronics, 2022, 50(4):789-795.

[12] Yang Yan, Duan Shihui, Zhang Changxing. Equivalent analysis method and parametric modeling of honeycomb structure [C]// Proceedings of the 21st National Conference on Composite Materials (NCCM-21). 2020.

[13] Yang Development, Mu Jiahong, Li Weihua, Yang Yunpeng, Li Jiandong, Yang Wei. Parametric design and simulation analysis of rice precision seed metering tray based on Fluent/EDEM [J]. Chinese Journal of Agricultural Mechanics, 2020, 41(9): 7.

[14] Cai Ci. Research on the Visual Design of Electronic Products from the Perspective of Information Media [J]. China High-tech Zone, 2019, 000(015):220.

[15] Huang Jinting, Yuan Minghai, Wang Song, et al. Structural Design and Simulation Analysis of Lower Limb Rehabilitation Robot [J]. Mechanical and Electrical Engineering, 2018, 35(2):5.

[16] Hou Tengyu, Liu Laiyun, Chen Ran, et al. Structural design and simulation analysis of a large-load electric cylinder [J]. Electromechanical Technology, 2022(1):4.

[17] Jia Xinpeng, Yuan Fengwei, Huang Zhenpu. Structure design and simulation analysis of automatic guided vehicle (AGV) frame [J]. Mechanical and Electrical Engineering Technology, 2022, 51(3):5.

[18] Tian Ye, Liu Jianchao, Zhu Xuekai. Structural design and thermal simulation analysis of a closed chassis [J]. Mechanical and Electrical Engineering Technology, 2021, 50(8):4.

[19] He Jian, Zheng Xiang, Wang Qingchun. A Simulation System for Radome Parameterization and Rapid Strength Analysis: CN112199880A[P]. 2021.

[20] Fan Xirong, Zhang Xiaoming, Liu Chen, et al. Research on structural design and parametric modeling of freight cableway support for transmission lines [J]. Modeling and Simulation, 2021, 10(3):9.

[21] Liu Weibiao. Design and marketing innovation capacity building of large-scale non-standard structural parts based on Internet technology [J]. Kunming Steel Science and Technology, 2020(4):5.

[22] Guan Shimin. Parametric Structural Analysis and Simulation of Gas Jet Field of Multi-platform Missile Launch System [D]. Anhui University of Technology, 2019.

[23] Yuan Xia. AutoCAD-based parametric drawing system for metal structural parts [J]. China Metal Bulletin, 2018(11):2.

[24] Liu Wei, Wei Zhifang, Yuan Dawei, et al. Parametric design and dynamic simulation of rotary locking mechanism [J]. Journal of Artillery Launch and Control, 2018, 39(2):6.

[25] Zhang Wenzheng, Dong Xinfeng, Wang Jinbo, et al. S-box parametric design method and storage medium based on bit and operation: CN112511293A[P]. 2021.

[26] Dai Hao, Hao Bo. Knowledge-based Intelligent Design of Aircraft Structural Parts [J]. Combined Machine Tool and Automated Machining Technology, 2021(4):3.

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Application of Dynamic Random Network Structure in the Modeling of the Combination of Core Values and Network Education in the Propagation Algorithm

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Abstract:The topological structure of the network relationship is described by the network diagram, and the formation and evolution process of the network is analyzed by using the cost-benefit method. Assuming that the self-interested network member nodes can connect or break the connection, the network topology model is established based on the dynamic random pairing evolution network model. The static structure of the network is studied. Respecting the psychological cognition law of college students and innovating the core value cultivation model can reverse the youth's identification dilemma with the core values, and then create a good political environment for the normal, healthy, civilized and orderly network participation of the youth. In recognition of the atmosphere, an automatic learning algorithm of Bayesian network structure that effectively integrates expert knowledge and data-driven methods is realized.

Keywords: Dynamic Random Network Structure, Core Values, Network Education, Propagation Algorithm

1. INTRODUCTION

As the spiritual support of Chinese society, the socialist core values are not only the value standard for Chinese society to judge the right and wrong [1], but also an important guarantee for the long-term stability of the country. In order to investigate the cognitive and identity status of college students' core values, in August 2015 [2], the researchers conducted an open dialogue in questionnaire design, established a security system, and organized ideological and political education [3]. It focuses on clarifying and processing network information, taking the initiative to resist negative network information, and making beneficial contributions to maintaining the security and stability of colleges and universities [4].

A great deal of research on networks has occurred in social sciences, economics, physics, mathematics, and computer science, and these disciplines take different approaches and ask different questions [5]. As a result, network research presents an interdisciplinary and multidisciplinary approach. Features [6]. In the most efficient spectrum utilization mode, the reuse rate of the spectrum is increased to provide as many available channels as possible for the mobile communication equipment in each cell. The channel assignment problem is an NP-complete problem in combinatorial optimization [7]. The establishment of a Bayesian network usually requires two steps of structure learning and parameter learning [8]. Among them, the structure learning is difficult and has become a key problem restricting the establishment of Bayesian networks. Values The cohesion determines the direction and level of a country's cultural development [9]. The Communist Party of China has always attached great importance to the construction of socialist core values [10].

At present, our country is in a period of social change and economic transformation, traditional ideas and modern ideas are intertwined [11], eastern and Western cultures are constantly exchanged and collided, and social thoughts are in a complicated state [12]. We urgently need the mainstream ideology of socialism to guide pluralistic thinking. With the deepening reform and gradual opening of my country's financial market [13], my country's banking market will face a more complex financial market environment. A large number of banks and assets in the financial market will form a complex network relationship through direct or indirect effects [14]. The risk of the whole market may cause a crisis in the entire market, which requires my country to have a higher systemic risk supervision capability. Therefore, the formation of banking systemic risk based on network theory. In the early 1990s [15], the reform bill announced by the Federal Deposit Insurance Corporation of the United States aroused the thinking of systemic risk in the international academic community. Systemic risk is not systematic risk in the traditional sense [16].

Systematic risk, also known as market risk, mainly refers to the impact on the entire financial market or the real economy caused by macro factors such as political, economic and social environments [17]. This risk cannot be dispersed through investment diversification. A study of the definition and characteristics of new media. More than 40 years ago, P. Goldmark, director of the CBS Network Technology Institute, called "electronic video" "new media" [18], and the concept of new media was born. Subsequently, E. Rostow, chairman of the Presidential Select Committee on American Communication Policy [19], mentioned the concept of new media many times in the report submitted to President Nixon. The theory and application of particle swarm optimization algorithm and fuzzy clustering algorithm have been deeply studied due to their simple structure and easy implementation. Good control effect is the focus of this study [20].

In this section, the research status of the two types of model-related problems will be introduced in detail. Directly affected by the status [21] of political identity, the youth identity dilemma of core values will inevitably have a negative impact on the main path of college students' political participation—online political participation [22]. The report of the 18th National Congress of the Communist Party of China raised the issue of cultivating and practicing socialist core values

from three levels: state [23], society and individual. The whole society is generally mobilized, actively implemented, and strives to practice the core socialist values. While improving the height of self-spirit, it also forms a good social atmosphere [24]. What kind of network is likely to appear in society is very important for people to make specific decisions. Crucially, networks of relationships play a central role in a variety of social, economic, and political interactions; social network analysis is an important and well-developed field in sociology; network analysis in economics is largely in the past in 10-15 years, formal modeling of networks has now reached maturity in various fields.

2. THE PROPOSED METHODOLOGY

2.1 The Dynamic Random Network Structure

At present, there are a variety of algorithms for studying channel assignment. Some authors use heuristic algorithms to solve fixed channel assignment (FCA) and DCA neural network technology, and the idea of simulated annealing has been applied in this regard, but neural network technology is easy to fall into local optimum. Solution. The main methods of Bayesian network structure learning are two categories: data-driven methods and expert knowledge-based methods.

The learning efficiency of data-driven methods is low, and the modeling process is restricted by the defects of data samples and algorithms, so it is difficult to guarantee the accuracy. In the context of the new media era, various for-profit online publicity platforms are "hundred flowers blooming", which to a certain extent promotes the The dissemination of socialist core values. Compared with the "one-to-many" interactive mode of government affairs network platforms, the "point-to-point" interactive mode of for-profit websites shows stronger participation and interaction. Although a large number of research results show that excessive investment diversification is more likely to cause banking systemic risks, it is still not clear how much investment diversification can be more conducive to the stability of the banking system. Based on the investment diversification model in the simple financial market constructed in this chapter. No matter how each node is labeled, as long as the label of each node is unique, the definite node can be found by the label.

2.2 The Core Values and Network Education

The interactive function of new media not only lays a solid foundation for the socialist core value of "equal dissemination". Clustering is a basic method of multivariate data analysis, which includes statistical methods such as mean value in the existing data clustering methods algorithm, fuzzy mean algorithm.

Optimization methods, such as probabilistic clustering, heuristic methods, such as tree search methods; competitive learning methods, such as self-organizing inference theory, self-organizing mapping (methods; graph theory, such as spectral clustering methods. Highly prone to cyber violence, moral judgment Such irrational political participation behaviors. Contemporary college students' identification dilemma with socialist core values has intensified the utilitarian, irrational and political indifference of college students' online political participation to a certain extent, which is not conducive to the healthy development of democratic politics. Practicing the core socialist values, strengthening network supervision and correctly guiding public opinion on the network platform with fast dissemination speed, large influence range and wide coverage area is of great significance for realizing a clear network space and maintaining network civilization. Therefore, it is necessary to use random and stable Bala and Goyal (2005) also examine network formation in dynamic contexts; however, their approach differs significantly from AlisonWatts's both in terms of modelling and findings. Bala and Goyal (2005) And Goyal is not too concerned about the non-cooperative game can be unilateral. As a result, the number of cells violating EMC may be small, while the number of channels violating EMC within the cell may be very large.

This study proposes a dynamic channel allocation model based on minimizing the number of cells and the number of channels that violate EMC between cells. The model comprehensively considers the two violations. The multi-signal flow graph model uses a directed graph to describe the fault propagation dependencies, which can be used for Realize complex system diagnostic modeling, algorithm design and other functions, which have been widely used in aerospace. Compared with private websites whose main purpose is profit, official websites do not need to overly consider the profit problem in the process of information dissemination. They are more It is to consider how to highlight its policy-oriented role, which is an important reason for the seriousness of information dissemination on official websites.

2.3 The Modeling of the Combination of Core Values and Online Education Communication Algorithm

Testability design, maintenance management and other fields of high-tech systems such as industrial control and medical equipment. Further study the relationship between investment diversification and banking systemic risk. According to the analysis of the research status of the inter-bank lending market, the degree of connectivity of the inter-bank lending network will have different effects on risk contagion, and the topology of the lending network will also have different effects on risk contagion. The original meaning of fragmentation is to turn a complete thing into small pieces, and the use of this word in my country is more often found in communication research.

At present, there are many related literatures on the combination of particle swarm algorithm and neural network, but they are more focused on practical applications, and have not been deeply analyzed in theory. This section discusses the stability of the combined model, gives the setting range of parameter initialization, and provides theoretical support. Some update cycles can only be calculated in terms of "months" or "years", and most updates are based on forwarding. This kind of dissemination content cannot track the hotspots of current affairs, nor can it attract a wide audience, lose the propaganda effect, and eventually become a "dead network", which is the inevitable result. Interbank lending is mainly carried out by banks due to temporary capital shortage Interbank borrowing funds usually have a short transaction period and therefore cannot be used for long-term investment, but can be used as an important source of bank liquidity.

3. CONCLUSIONS

Based on the dynamic random pairing evolution network model, the topology structure model of the network is established. The static structure, dynamic evolution, stability and validity of the network and their relationship are studied.

Colleges and universities should be good at applying the connotation and essence of socialist core values to dealing with the crisis of network public opinion. Choose the best public relations plan to control the overall direction, use the power of network assistants to positively guide the online public opinion of colleges and universities, and clarify the situation by transmitting and communicating information.

4. REFERENCES

[1]Yu Hongguang. Linking with reality and guiding practice——On the strategy of integrating core values education in the teaching of "Morality and the Rule of Law" [J]. Hebei Education: Moral Education Edition, 2019.

[2] Zhou Jing. On the Integration of College Students' Aesthetic Culture Education and Core Values [J]. Modern Communication, 2020(11):2.

[3] Li Xia. Promoting the integration of core values through cultural integration [J]. Jiangsu Health Management, 2018, 29(6):3.

[4] Wang De, Meng Guangsheng, Huang Dezu, et al. Research on the construction and cultivation of the core values of college student cadres in the era of media fragmentation: Taking Guangxi University of Traditional Chinese Medicine as an example [J]. Regional Governance, 2022(19):6.

[5] Pang Zhi. Research on the current situation and countermeasures of network communication of socialist core values under the background of "One Belt and One Road" [D]. Guilin University of Electronic Science and Technology, 2019.

[6] Lei Yingyi. Research on the effective path of education reform based on the core values of college students [J]. Microcomputer Application, 2018, 34(8):3.

[7] Qi Xiaoping. The new characteristics of \"Internet + social thought\" communication in the new era and the logical turn of response [J]. Journal of Shandong Normal University (Humanities and Social Sciences Edition), 2018, 063(001):146-156.

[8] Huang Rongmei. New media and the cultivation of college students' core values of social justice——Based on the analysis of students' demand side [J]. Journal of Changjiang Engineering Vocational and Technical College, 2018, 35(2):3.

[9] Li Guangsheng. Discussion on the Educational Methods of Core Values in the New Media Era—Taking the College Students of Public Security Colleges as an Example [J]. Liaoning Higher Vocational Journal, 2019, 21(4):5.

[10] Zhu Shaoping. A practical research on the integration of core values into epidemic education [J]. Teacher Expo: Late Issue, 2021(11):2.

[11] Li Bo. Research on the strategy of cultivating high school students' political core values under the Internet + Three Gorges culture [J]. Contemporary Tourism: Late Period, 2019(10):1.

[12] Li Huiyuan, Li Yunque, Zhang Jun, et al. Research on the Prospects and Challenges of the Integration of Blockchain Technology into the Core Values Cultivation Mechanism of Contemporary College Students [J]. Journal of Southwest University for Nationalities: Natural Science Edition, 2020, 46(3):8 .

[13] Ju Tong. The inheritance and development of cultural self-confidence of core values in the course of comprehensive practical activities [J]. Research on Comprehensive Practical Activities, 2020.

[14] Wu Yonggang. The dissemination and innovation of socialist core values in the era of webcasting [J]. Research on Ideological and Political Courses, 2020(3):6.

[15] Zhou Wenchao, Zhu Jingfeng, Qu Yong. The dissemination path of socialist core values in the new media environment: a review of "Research on the Permeability of Socialist Core Values Education" [J]. China Party and Government Cadres Forum, 2019(7).

[16] Liu Penmei. Research on the Correlation and Integration of Traditional Core Values and College Students' Thought Cultivation in the New Era [J]. Education Modernization, 2019.

[17] Gao Ting. The influence of online literature on the core values of college students in the new media environment and coping strategies [J]. Friends of Humanities, 2018.

[18] He Hailin, Jiang Yulian. Strategies for using new media to develop core values education [J]. Theory of Learning, 2018(3):3.

[19] Yi Danli, Zheng Lijun. Research on the Influence of Internet Public Opinion on College Students' Core Values and Countermeasures [J]. Journal of Contemporary Teaching and Research, 2018(12):2.

[20] Wu Ting. Using the "5W" model to clarify the dissemination path of socialist core values in the cultural education of colleges and universities [J]. Audiovisual, 2018(10):2.

[21] Zhu Mengyuan. The impact of new media on the dailyization of college students' core values [J]. Modern Communication, 2020(15):3.

[22] Zhou Wenchao, Zhu Jingfeng, Qu Yong. The dissemination path of socialist core values in the new media environment: a review of "Research on the Permeability of Socialist Core Values Education" [J]. China Party and Government Cadres Forum, 2019(7): 1.

[23] Xu Yinghong. An Analysis of the Mechanism and Path of the Spread of Socialist Core Values in Rural Areas——Based on the Follow-up Investigation of the "Gongde Bank" in Hesilu Village, Yiwu City [J]. Journal of Liaoning Administration Institute, 2019(2):5.

[24] Ou Xiaoyan. A New Approach to the Education of College Students' Core Values in the We-Media Era——Based on the Perspective of Memeticism [J]. Journal of Shangrao Normal University, 2019, 39(2):6.

[25] Xie Chali, Guo Jiaxin. Research on the Cultivation Path of "Post-95" College Students' Core Values in the Self-Media Era: Taking Shaanxi as an Example [J]. Curriculum Education Research, 2019(41):3.

Kong Lidan. An innovative path for colleges and universities to carry out education on the theme of socialist core values: Taking Jiangnan University as an example [J]. Education Modernization, 2018, v.5(23):52-54.

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Improving the Teaching Innovation Ability of College Ideological and Political Teachers Based on the Teaching Innovation Ability Model

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Abstract: As the main force of ideological and political education in university courses, professional course teachers play a crucial role in the implementation of professional course ideological and political education. By using analytical methods to systematically analyze the advantages, disadvantages, opportunities, and threats of ideological and political education for professional course teachers in universities, it is found that teaching cognition, knowledge reserves, teaching methods, and teaching mechanisms affect the effectiveness of ideological and political education for professional course teachers. As the theoretical teaching guide for innovation and entrepreneurship education, the research ability of ideological and political course teachers is not only closely related to the development of their professional level, but also has an impact on the effectiveness of ideological and political education and the quality of innovation and entrepreneurship education. Therefore, exploring the related issues of improving the research ability of ideological and political course teachers has certain research value for promoting innovation and entrepreneurship education.

Keywords: Teaching Innovation; Ideological and Political Teachers; Innovation Ability Model

1. INTRODUCTION

Teachers of ideological and political courses have been on the front line of teaching for a long time, facing complex teaching tasks such as lesson plan preparation, question answering, practical guidance, and homework review every day. It is difficult to coordinate the balance between scientific research and teaching. Faced with the rapidly developing social situation, teachers are unable to update scientific research information in real-time and lack sufficient time to master scientific research knowledge. Secondly, there is a weak awareness of scientific research. Some ideological and political course teachers prioritize scientific research over education, choosing to devote themselves wholeheartedly to teaching work, neglecting the importance of scientific research, resulting in insufficient understanding of scientific research knowledge, academic trends, and cutting-edge information, making it difficult to effectively integrate ideological and political teaching with academic research, and lacking a new knowledge reserve in the process of ideological and political education, which is not conducive to the development of innovation and entrepreneurship education for contemporary college students.

In accordance with the spirit of the "Implementation Opinions on Further Strengthening and Improving Ideological and Political Education for College Students" issued by the Provincial Party Committee and Government, we actively guide universities to independently establish a teaching and research department for ideological and political theory courses under the leadership of the Party Committee of the directly affiliated school, fundamentally solving the systemic obstacles that affect the stability of the teaching team and the overall improvement of quality. Currently, 71.4% of universities in the province have implemented this requirement. The disciplinary status of ideological and political theory courses has been affirmed, and educational and teaching resources have been effectively guaranteed. Utilize the ability to grasp implicit morality, explore and integrate ideological and political elements, innovate teaching methods, and cultivate students through ideological and political education in the curriculum. This requires professional course teachers to strive to learn to explore and utilize the moral education elements in professional courses and complete the task of cultivating morality and cultivating talents.

The ideological and political teaching ability of professional course teachers in universities includes the awareness and ability of ideological and political education in the curriculum. The ideological and political teaching ability of professional course teachers in universities is one of the very important abilities, and its content and elements are flexible and variable. To achieve the educational goal of cultivating morality and cultivating talents is a practical issue that urgently needs attention. The article adopts the analysis method to systematically analyze the internal advantages and disadvantages, external opportunities, and threats of ideological and political education for professional course teachers. It summarizes the main factors that affect the ideological and political education of professional course teachers and proposes corresponding countermeasures to improve the teaching ability of ideological and political education for professional course teachers in higher education.

There is an internal connection between teaching and scientific research that promotes and complements each other. The explanation of ideological and political knowledge requires a solid scientific research theory as the foundation, and excellent professional talents also contribute to the innovative development of scientific research. Therefore, ideological, and political course teachers should first face the important role of scientific research ability in the current situation, enhance scientific research awareness, improve scientific research literacy, and clarify the direction of scientific research based on the teaching professional field and the applicability of scientific research, develop personalized scientific research training plans, to improve their own scientific research ability. Secondly, teachers of ideological and political courses should have a correct understanding of

the relationship between teaching and scientific research. Based on the actual teaching situation, they should effectively combine teaching work with scientific research, and initiate educational research work with "teaching as the main focus and scientific research as the auxiliary", to improve teaching methods and enhance teaching effectiveness.

2. THE PROPOSED METHODOLOGY

2.1 Analysis of the Innovative Ability of Ideological and Political Teaching for Professional Course Teachers in Universities

Improve the ability to grasp teaching laws. Our province adheres to holding annual teaching observation meetings and academic seminars based on different courses, regularly soliciting, selecting, and publishing excellent lesson plans and teaching demonstration films. Developing and integrating network resources, a large network group has been formed, with the "Guangdong University Ideological and Political Theory Course Teaching Online" website as the main body, supplemented by high-quality course websites, personal websites of famous and backbone teachers, blogs of excellent ideological and political theory course teachers, and situation and policy teaching websites. Some professional course teachers have a vague positioning, believing that their responsibility is to impart professional knowledge and skills. The formation of college students' values is the work of ideological and political course teachers and student workers, resulting in a separation of teaching and education, namely the division of "economic teacher" and "human teacher".

Some teachers lack a sense of responsibility and a spirit of research, failing to achieve a combination of teaching and nurturing, that is, the cultivation of morality and talent. Professional awareness can promote professional course teachers and other teachers to work together to promote the growth of college students and the smooth promotion of ideological and political education in the curriculum. Integrating the ideological and political elements of truth, goodness, and beauty into various professional classrooms is a prerequisite for teachers to carry out ideological and political teaching in courses. The types of professional courses are quite diverse, with a total of 12 subject categories, 92 professional categories, and 506 majors in the undergraduate major catalog of ordinary higher education institutions . Each type of major and course will contain implicit ideological and political elements.

For example, in the specialized course of polymer physics, the cultivation of the scientist spirit is implied. The story of the scientist is used to stimulate the students' national feelings of loving the party and patriotism, and to cultivate the professionalism of loving the job. Innovation and entrepreneurship education and ideological and political education have a certain degree of integration and interoperability in talent cultivation, and ideological and political course teachers play an important role as guides. Therefore, the improvement of scientific research ability of ideological and political course teachers will have an impact on innovation and entrepreneurship education.

On the one hand, as theoretical knowledge guides for innovation and entrepreneurship education, ideological and political course teachers need to have sufficient knowledge reserves, and with the rapid development of society, teaching content needs to be constantly updated. Strengthen theoretical research, enhance learning awareness and theoretical literacy. Our province regularly distributes research project guides for ideological and political education in universities, conducts research on teaching hotspots, difficulties, and key points, and based on this, focuses on building a "Lingnan University Moral Education Library" that comprehensively reflects the theoretical research results of ideological and political education in Guangdong universities. Currently, two sets of books have been published. In recent years, the teaching evaluation systems of various universities have been continuously improved and improved, which has played a positive role in stimulating professional course teachers to reflect on teaching and continuously promoting their professional growth.

2.2 Strategies for Improving Innovative Ability in Ideological and Political Education in Universities

First, "Internet plus Education" has broken through the physical time and space constraints of professional course teachers' access to teaching resources. Teachers can learn about hot social issues through the Internet and integrate hot topics into classroom teaching. Secondly, "Internet plus Education" provides a platform for professional teachers across the country to exchange experiences and learn from each other. Professional course teachers in universities across the country can learn typical courses such as "The Great Country Strategy" and "China Series" through learning platforms such as MOOC and Tencent Classroom, draw inspiration and inspiration from them, and then carry out ideological and political education based on the characteristics of their own schools and majors, enhancing the effectiveness of education.

Improve the work support system and form a scientific decision-making mechanism involving multiple parties. Increase support for the provincial research association on ideological and political education in universities, adjust and enrich the teaching guidance committee for ideological and political theory courses in universities, fully leverage the role of experts in work research, thematic research, academic support, talent training, information exchange, practical investigation, decision-making consultation, quality evaluation, and other aspects, and form a scientific decision-making mechanism that combines government administrative power with academic power in universities. Professional course teachers should establish a correct ideological and political perspective, understand the meaning of curriculum ideological and political education, and strengthen the subject consciousness of curriculum ideological and political education.

Deepen the understanding of the importance of ideological and political work in the curriculum, and the educational philosophy is to have a clear understanding of one's own responsibilities. Professional course teachers should change the concept of simply imparting professional knowledge and skills, adhere to the unity of knowledge and value guidance, grasp the characteristics and laws of the taught professional courses, and carry out ideological and political education in courses based on specific professional characteristics and course characteristics.

Teaching and educating people are the sacred mission and unshrinkable responsibility of teachers. However, in the environment of professionalization and skill-based education, there are misunderstandings among professional course teachers in their understanding of teaching and education. They adhere to the attitude of "ideological and political

education is not related to themselves", which leads to the "solitary struggle" of ideological and political teachers and the "islanding" of courses. Based on exploring ideological and political resources, professional course teachers should learn to distinguish them. Avoid copying ideological and political resources into professional courses, let alone mixing them with professional courses and ideological and political theory courses for teaching. Professional course teachers should combine their own curriculum and learning characteristics, accurately integrate ideological and political resources into the curriculum, and achieve education with ideological and political infiltration.

For example, philosophy and social sciences courses can appropriately incorporate relevant elements of ideological and political education into the teaching content of professional courses. Curriculum ideological and political education carries the dual task of knowledge education and ideological education and puts forward higher requirements for the ability of professional course teachers to teach and educate people. Professional course teachers should not only possess profound professional knowledge, but also possess ideological and political literacy, enhance ideological and political sensitivity, and enhance the integration of teaching resources. Firstly, the primary prerequisite for the ideological and political education curriculum is professionalism. Professional course teachers should constantly enrich their professional knowledge, expand the curriculum within the professional coordinate system, utilize the worship psychology of college students to enhance classroom learning participation, guide students to have a comprehensive understanding of their major, establish professional awareness, learn, love, and do.

3. CONCLUSION

Teachers of professional courses in colleges and universities should seize the opportunities of ideological and political construction of courses, actively respond to various threats, bravely assume ideological and political responsibilities, and active learning new ideas and teaching models of ideological and political education of courses. To strengthen communication between teachers both inside and outside the school, draw on the excellent experience of demonstration courses, and continuously improve one's own sensitivity to ideological and political education and the ability to integrate ideological and political resources. We need to grasp the laws of education, innovate methods of education, explore curriculum ideological and political models that conform to the characteristics of the subject and the profession, let professional knowledge and ideological and political education enter the brain, ears, and heart, and achieve the harmonious unity of knowledge and virtue.

4. REFERENCES

[1] Chen Aixiang Research on the Teaching Development of Young Teachers in Ideological and Political Theory Courses in Universities Hunan University, 2019

[2] Xiangdongping On the Construction of Teaching Teams for Ideological and Political Elective Courses in Private Universities -- Taking the "China Series" Courses of Shanghai Lida University as an Example [J] 2021(2019-4):144-146.

[3] Chen Yingying A Study on the Professional Quality Development of College English Teachers in the New Normal -- A Case Study of Kashgar University [J] Education Research, 2021, 4 (3): 138-140

[4] Zhou Song Exploration and Reflection on the Effectiveness of Ideological and Political Courses in Universities [J] Academic Theory, 2014 (21): 199-200

[5] Peng Junlin, Zhu Ji Reflections on Improving the Research Based Learning Teaching Ability of Ideological and Political Course Teachers in Universities under the New Situation [J] Journal of Higher Education, 2016 (7): 3.

[6] Li Jianmin and Peng Aihui Analysis and Ability Enhancement Strategy Research on Ideological and Political Teaching for Professional Course Teachers in Universities [J] Journal of Higher Education Research, 2021, 044 (004): 93-100

[7] Huang Yanjun Analysis on the Integration of Teaching and Research for Teachers of Ideological and Political Theory Courses in Universities - A Review of "Research on the Organizational and Behavioral Patterns of Innovative Research Teams in Universities" [J] Science and Technology Management Research, 2020, 40 (11): 1

[8] Li Guopeng Research on Strategies for Improving the Teaching Ability of Ideological and Political Teachers in Tianjin Adult Universities [J] Journal of Tianjin Vocational College Union, 2021 (7): 80-84

[9] Chen Huanhuan Research on the Improvement of Scientific Research Ability and Innovation and Entrepreneurship Education of Ideological and Political Course Teachers: A Review of "Innovation and Entrepreneurship Education in Universities under the New Situation" [J] China University Science and Technology, 2020 (11): 1

[10] Zhou Xingzhi, Zhang Xing, Ma Zhuo A Study on the Path to Enhance the Ability of Teachers in Applied Universities under the Background of "Curriculum Ideological and Political Education" [J] Industry and Technology Forum, 2020, 19 (22): 2.

[11] Ma Shanshan Exploration of Improving the Ideological and Political Ability of Vocational College Teachers' Curriculum under the Mission of "Cultivating Virtue and Cultivating Talents" in the New Era [J] Journal of Yantai Vocational College, 2021

[12] Chen Shifa, Zhang Li on comprehensively enhancing the ideological and political construction ability of university teachers' curriculum [J] Marxism and Reality, 2020 (5): 7.

[13] Ding Yuxia Exploration of Improving the Practical Teaching Ability of Ideological and Political Course Teachers in Universities [J] Modern Commerce and Industry, 2012, 24 (7): 2.

[14] Luo Weiqi Innovative development platform to improve the educational and teaching abilities of ideological and political theory course teachers in universities [J] College Counselor, 2010 (6): 7-8

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Development of Intelligent Software for Attribution of Mental Disorders in College Physical Learning Based on Clustering Algorithm of Internet Trace Data

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Abstract:Define the concept of "network traces" in combination with relevant research; classify network traces from different perspectives, such as institutional traces and personal traces, active traces and passive traces, explicit traces and invisible traces, etc. Through observation, interviews, questionnaires and other methods to summarize and classify and analyze the reasons, put forward corresponding teaching countermeasures - thinking disorder intervention teaching method, apply it to teaching practice and continuously improve it in practice. The teaching countermeasures have produced positive effects, which provide a new idea for eliminating the psychological barriers to physical learning, and can also be used as a reference for teachers of other basic disciplines in colleges and universities.

Keywords: Intelligent Software, Mental Disorders, College Physical Learning, Internet Trace Data

1. INTRODUCTION

Difficulty in learning is a frequently encountered topic in psychological research during the semester. The research on learning difficulties in the psychology field is directed towards the weak-key JL children [1], even if it is the study of the Vendants, the honey, and the gills, it belongs to the Wushu religion. Sao Tululu, Huo Li's object of breaking Wei, betrayal school, is the point of standing. Improving the quality of physics teaching [2] has become the consensus of the majority of physics educators. In recent years, the research on the reform of college physics teaching is in the ascendant, and the results are constantly emerging [3]. The main research focuses are: the innovation of the college physics curriculum system J, the construction of teaching materials L2J, and the reform of teaching content, teaching methods and teaching methods [4].

The author believes that this work is actually a process of dispelling doubts. From a micro perspective, it is to respond in a timely manner to the real confusion that students encounter in their study and life [5], social practice, and even heated discussions in public opinion. In recent years, college students have suffered from mental illness. Attribution theory is a new theory emerging in psychology [6] research in recent years. Physical learning psychological disorder refers to the infarction of psychological activities of students in the process of physical learning, poor psychological adjustment and adaptation mechanisms [7], failure to achieve learning goals, unmet needs, and difficulties that cannot be overcome, resulting in unhealthy psychological performance and behavioral tendencies. Phenomenon [8].

Attribution theory believes that correct attribution can improve the motivation level of activities, improve the way of activities and behaviors, and thus improve the effectiveness of activities [9]. Among the many factors that affect students' learning effectiveness, analyze the various types of obstacles to college physics [10] learning methods and their causes, put forward more systematic teaching strategies and apply them to teaching practice, and test the actual effects of teaching strategies through strict educational experiments [11]. In the current research on scientific research groups, the analysis based on the characteristics of teachers' scientific research groups has important reference value in the professional characteristics of scientific and technological talents [12], talent flow, career development [13], scientific research cooperation, the establishment of discipline projects, and the evaluation of scientific research ability [14]. The image is segmented by selecting the appropriate grayscale threshold to distinguish the target from the background. The image thresholding method is described in detail in the literature, and the most representative thresholding method is the Otsu method [15].

In the article "Research on the Physical Learning Difficulties of High School Girls and Their Countermeasures", the author draws [16] on the previous theoretical and practical experience, although the causes of the physical learning difficulties of high school girls are discussed in depth, and on this basis, a new [17] Taking the idea of round curriculum reform as the guiding ideology, the strategies to solve the physical learning difficulties of high school girls are put forward. With the rapid development of the Internet, any individual will leave [18] various traces of information intentionally or unintentionally when surfing the Internet. There is currently no relevant and authoritative definition of the traces left on the Internet [19]. Related concepts include "travel digital footprint", "network intrusion trace", "network footprint" [20].

Li Ting gives education to Guo Chusai and Phosphorus to meet the demands of the future, poking at the main educational theory as a shake [21] As well as the strength of slaughter and hair mole pith is coy. Constructivism Yuanbai's theory of cognitive development, because the cognitive development of individuals is closely related to the learning process [22], so using constructivism can better explain the cognitive laws of the human learning process, that is, it can better explain how learning occurs, how How meaning is constructed, how concepts are formed, etc. [23] The subjects of the study are the undergraduates of Jingchu Institute of Technology [24].

On the basis of random arrangement of classes in the same major, through the pre-test to understand the physical foundation of the students, 2 classes of the 2011 mechanical manufacturing and automation major were selected. The procedural method refers to the method adopted in each link of physics learning. When students apply the programming method, some learning links are missing, or the method is improperly applied in the main learning links of preview, lecture, review, homework and summary.

2. THE PROPOSED METHODOLOGY

2.1 The Internet Trace Data Clustering Algorithm

This study collects the statistical information on the scientific research achievements of scholars on the Internet, analyzes the indicators of scientific research personnel's journals, conference papers, works and other indicators based on data mining methods, and uses mathematical statistics and other methods to establish scientific research ability evaluation indicators of scientific researchers. However, the single-target grayscale images processed in the criminal investigation trace image are relatively few, and even in the case of a single target, due to the complexity of traces and backgrounds, there may be multiple peaks in the grayscale histogram. At this time, the threshold is selected.

At present, there is a wealth of information on the attributes of scientific research groups and related information on scientific research results on the Internet. This subject takes information metrology as the theoretical guidance, applies data mining technology in the analysis of scientific research group characteristics, and conducts data mining and acquisition of the characteristics of scientific research groups of college teachers. However, for trace images, due to the interference of complex backgrounds, they do not have bimodality in many cases, so the conditions for the segmentation algorithm based on one-dimensional gray histogram do not exist, and satisfactory results are often not obtained. Different subjects who create information can be divided into institutional traces and personal traces; for example, various news media reports and company website information are all organizational traces.

Personal homepages and published comments are personal traces. According to the willingness of the subject of information creation, it can be divided into active traces and passive traces. In data mining, some personal information data of teachers collected from the official website of colleges and universities and the achievement data of teachers in the homepage of scholars are stored in different data tables, and the complex background of the image is stored in different data tables. It is always located in the neighborhood of the target to be segmented, that is, the pixels of the image have a great correlation with its neighborhood. Therefore, many scholars have taken this into account and proposed the concept of a two-dimensional histogram. Before data mining, it is necessary to analyze the data. Aggregate, summarize the achievement data information by category and calculate the number of results of each category, and then summarize it and the teacher's personal information into the same data table.

2.2 The Attribution of Psychological Disorders in College Physics Learning

The goal of data mining is to discover hidden meaningful knowledge from massive data through a specific method. The most commonly used main functions include: cluster analysis, association analysis, classification and prediction, deviation analysis, evolution analysis, etc. According to whether the real identity information of the information publisher can be obtained, it can be divided into real name traces, anonymous traces and pseudonym traces. Real name traces usually include news information, magazines, celebrity blogs, etc. published on the websites of various authoritative institutions. Anonymous information includes various social networking sites. Anonymous comment information.

To formulate and improve the questionnaire of college physics learning thinking disorder and carry out investigation and statistics on the research object, systematically understand various types of college physics learning thinking disorder and analyze the reasons. According to the three-dimensional classification model of Weiner's attribution theory, combined with the learning practice of "University Physics" course for non-physics undergraduates, a questionnaire for the success or failure of non-physics undergraduates in college physics learning was compiled. The internal factors of learning psychological disorders are student factors, and the external factors include physical discipline factors and teaching environment factors.

Strictly speaking, the physical subject factors should belong to the physical teaching environment factors. In the research, the physics subject factors are separated from the teaching environment factors. The questionnaire is mainly composed of two parts. The students were asked to self-evaluate the learning effect of college physics. Gardner's theory of multiple intelligences summarizes the problems related to intelligence in students' learning realistically. According to the theory of multiple intelligences combined with practical investigations, it can be seen that the average intelligence level of boys and girls in middle school is not much different.

2.3 The Psychological Disorder Attribution Intelligent Software Development

The lack of learning goals causes psychological confusion. The freshmen have not fully adapted to university life. Students only focus on knowledge learning and ignore method learning; lack of systematic training in learning methods, students' learning methods are fragmented rather than systematic. The goal of further study is reached, but the new learning goal is not yet or not very clear. It is temporarily in the state of lack of goal, which is easy to breed anxiety, slackness and other negative emotions. Students only focus on knowledge learning and ignore method learning; lack of systematic training in learning methods, students' learning methods are fragmented rather than systematic. It can be seen from the results of the three-dimensional space scatterplot that a positive curve can be used to simulate the evaluation distribution of the scientific research group in universities.

Due to the density difference in the distribution of data points in the scatter plot, the cluster analysis method of data mining technology can be used to deeply mine the data for the distribution of personnel in the scientific research group in colleges and universities. According to the characteristics of girls' language and language intelligence having certain advantages, appropriate language can be used for physics teaching. In teaching, we should seize every opportunity to play and display this specialty of girls, and try to let them use their own language to summarize and summarize. Emphasize the importance of learning links, urge students to overcome inertia, insist on using program methods, and avoid unnecessary difficulties caused by missing links.

Use the introductory course system to explain the learning methods and specific requirements of each learning link. The grayscale of each pixel of the image is used as a sample to perform clustering. When the image is large and the sample size increases, the time efficiency is very low. The weighted fuzzy c-means clustering algorithm [7-8] Yuan WFCM takes the L gray level samples of the trace gray image and proposes a specific improved calculation formula. This section will introduce the specific implementation steps of this method and conduct example verification. The specific writing ideas are as follows: First, preprocessing operations such as cleaning the original data information of scientific research group characteristics crawled from the web.

3. CONCLUSIONS

Then, the network data is obtained by analyzing the network trace characteristics of the scientific research group, and the two main research problems in the related fields are analyzed for the characteristics of the scientific research group, and the overall scientific research status of the scientific research group is analyzed macroscopically. Both internal and external reasons lead to the widespread psychological obstacles of college students' physics learning. Through the current situation investigation and classification according to the causes, the foundation has been laid for exploring efficient teaching strategies. The proposed teaching strategies have been preliminarily verified in teaching practice, and need to be further improved. It is verified by experiments in a large range, and gradually improved and promoted in teaching practice.

4. REFERENCES

[1] Sun Dong, Li Sheng, Chen Weihao. Psychological Barriers and Countermeasures in College Physics Learning [J]. 2020.

[2] Zhou Dan, Hu Yucai, Wang Jing, et al. Resource construction and application of intelligent online operation system for college physics [J]. Education Modernization, 2019, v.6(56):161-163.

[3] Gong Qingping. Research on the Attribution and Transformation Strategies of High School Students' Physics Learning Difficulties [D]. Harbin Normal University, 2019.

[4] Hu Yucai, Wang Jing, Zhou Dan. Research and practice of intelligent online homework system for college physics courses [J]. 2021(2018-2):43-46.

[5] Gao Zhiyong. College Physics Learning Disabilities and Countermeasures [J]. Digital World, 2019(3):1.

[6] Tong Yuxuan, Tian Ze'an, Deng Huiqiu. Design and application of Android-based university physics mobile learning platform [J]. University Physics, 2020, 39(4):6.

[7] Liu Hongbing, Xiong Hanqin, Zhang Shizhen, et al. Exploration and practice of blended teaching of "college physics" based on SPOC: Taking Donghua University of Technology as an example [J]. Journal of Donghua University of Science and Technology: Social Science Edition, 2019 , 38(1):4.

[8] Li Jingyao. Study on the psychological problems and attribution analysis of art students in higher vocational colleges [J]. 2020.

[9] Li Pingwei, Wang Qian. Attribution Analysis and Countermeasures of College Students' Psychological Crisis from the Perspective of Noddings' Caring Theory: Taking a "problem college student" of Lingnan Normal University as an example [J]. Journal of Kaifeng Institute of Education, 2019, 39 (11):2.

[10] Lan Cuicui, Zang Peng, Song Ziyue, et al. Research on the application of problem-based learning in the information environment: Taking college physics teaching as an example [J]. Science and Informatization, 2020.

[11] Zhang Qiang, Xue Hui. Based on the theory of comparative psychology to explore the teaching strategies of college physics in the era of intelligence [J]. Education and Teaching Forum, 2020(20):3.

[12] Shi Huigen. Research on high school physics teaching based on intelligent teaching [J]. New Curriculum, 2020.

[13] Zhang Yong, Zhou Zhiyong, Liu Su. Building a University Physics Smart Golden Course Based on Mobile Learning Big Data [J]. Physics and Engineering, 2019(S1):8.

[14] Yang Jun. The important quantitative standard of physics experiment course in college physics teaching [J]. New Generation: Theory Edition, 2020(19):1.

[15] Hu Jiao, Zhang Wenlan, Chen Sirui. Research on the Attribution of Attention Defocus in College Students' Fragmented Learning: A Qualitative Analysis Based on Grounded Theory [J]. Electronic Education Research, 2019, 40(12):8.

[16] Tan Lusa. Using contrastive psychological procedures to solve the problem of psychological boredom in physics learning [J]. 2021.

[17] Xia Qiping, Zhang Huihui. Innovation of University Physics Blended Learning Mode for Applied Talent Cultivation [J]. Journal of Langfang Normal University: Natural Science Edition, 2021.

[18] Yang Cuilan. The practice of applying psychological counseling technology to improve the efficiency and effect of physics learning [J]. Questions and Research: Teaching Forum, 2021(12):1.

[19] Lu Haishuang, Li Zhonghua, Gu Liping, et al. A brief discussion on the practical research of network teaching in the teaching of college physics courses in applied undergraduate colleges [J]. Science and Education Wenhui, 2021(22):3.

[20] Chen Weihao, Sun Dong, Li Sheng. Reflections on improving the interest in college physics learning [J]. 2020.

[21] Chen Hui. Research on the study burnout psychology of normal students in independent colleges from the perspective of attribution: taking F College as an example [J]. Think Tank Times, 2020(15):2.

[22] Lu Yanan. Discussion on the construction of a smart university physics laboratory in the information age [J]. Digital Design, 2020, 9(1):1.

[23] Hao Kun. Discussion on the intelligent classroom teaching mode of physics in junior high school [J]. 2020.

[24] Wu Haina, Gong Weijiang, Yi Guangyu. Visual Analysis of College Physics Learning Behavior Based on Rain Classroom [J]. Physics and Engineering, 2019(S1):4.

[25] Zheng Minxiao, Chen Danwen. Research on the construction of smart laboratories in colleges and universities under the "Internet + education" model: Taking the psychology laboratory of XX University as an example [J]. Frontiers in Social Science, 2022, 11(4):5.

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Transmission System Design of Dual-Mode Power-Split Hybrid Electric Vehicle

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Abstract: Based on the introduction of the mechanical structure and working principle of the new compound power-split hybrid electric vehicle, this paper studies the minimum equivalent fuel consumption energy management control strategy based on the minimum principle and builds the model and simulation environment through Simulink. Compared with the traditional internal combustion engine prototype vehicle, the fuel consumption per 100 kilometers under the NEDC cycle condition has significantly improved the fuel economy of the whole vehicle. The results show that the optimal control strategy formulated in this paper can realize the working mode of hybrid electric vehicles and achieve better fuel saving and control effects.

Keywords: Transmission System, Dual-Mode, Power-Split, Hybrid Electric Vehicle

1. INTRODUCTION

According to the power mixing ratio, hybrid electric vehicles can be divided into weak hybrid, medium hybrid, and strong hybrid. Among them, strong hybrid electric vehicles can achieve more than 40% fuel saving effect, which is the focus of research and development of major domestic and foreign automobile companies. Intensity mixing can be divided into two schemes: electromagnetic power splitting through dual-rotor motors and mechanical power splitting through planetary row. Under load conditions, it can run on the best economical operating line without being constrained by the wheel load, thereby saving fuel consumption but having an important impact on the development of the domestic automobile industry.

Honda's IMA motor-assisted transmission system, because its structure is like the traditional automobile transmission system, the cost increase is relatively small, and the fuel-saving effect is obvious. However, the Honda IMA motor-assisted transmission system cannot meet people's pursuit of higher vehicle fuel levels and is limited by the vehicle itself. Therefore, major domestic manufacturers are researching new hybrid vehicle transmission systems with higher fuel efficiency. There must be 2 input or output components. According to the different connection modes between the various components of the planetary gear mechanism and the engine, motor, and generator, it can be combined into 6 different structural schemes.

After the analysis of different structural schemes, the best structural scheme is the power transmission system structure adopted by Toyota Prius; another feasible scheme with slightly worse structural performance than Prius is that the engine is connected with the ring gear, and the motor is connected with the planet carrier. The generator is connected to the sun gear, and the performance of the other structural solutions is not as good as the above two solutions 131 - From the above analysis, when the vehicle is at a low speed or a high speed, there is an electric power cycle inside the composite power split system. Therefore, the system efficiency at low vehicle speed is optimized by adding a brake B1 on the planetary carrier, that is, at low vehicle speed, the engine is locked by closing the brake B1 through corresponding control, so that it is in a stopped state, and the whole vehicle runs in pure electric mode. A brake B2 is added on the shaft of the motor E1 to optimize the system efficiency at higher speeds, that is, at a higher speed, the corresponding control is applied to close the brake B2 to lock the motor E1. The engine directly drives the inner motor, and by adjusting the torque of the inner motor, the engine speed is closed loop controlled so that the engine always works at the best fuel consumption point.

As the electromagnetic makes the inner rotor rotate to generate electricity, the electromagnetic torque of the interaction between the inner and outer rotors will drag the outer rotor to rotate in the same direction as the inner rotor, but at different speeds. Under the control of the inverter, the inner motor makes the inner the torque of the motor and the power corresponding to the difference in the speed of the two rotors are transmitted in the form of electric energy to the high-voltage bus. The power corresponding to the torque of the inner motor and the speed of the outer rotor is still output in the form of mechanical energy to directly drive the wheels. The motor has a low-speed large with the characteristics of torque, high speed and high power, the power assist performance of the electric motor can be fully exerted no matter it is a low-speed driving condition or a high-speed driving condition. The electric motor improves the dynamic performance of the vehicle in a short period of time and has little impact on the operation of the internal combustion engine. It is also possible to reduce the power reserve factor of the engine and use an engine with a slightly smaller displacement when selecting the engine type.

2. THE PROPOSED METHODOLOGY

2.1 Dual-mode power-split hybrid system operating mode

The use of electric motors to assist can not only improve the power performance of the vehicle, but also effectively reduce fuel consumption and emissions. When the vehicle speed and required power are less than the set value, the engine is turned off at this time, and the battery supplies power to the motor II, and the motor II drives the car to run purely electric, or to accelerate from the original place or climb a steep slope at a lower speed, part of the output of the engine The power is generated by the motor I, and supplies power to the motor II together with the battery, and the motor II and the engine together provide the torque required for in-situ acceleration or

climbing. When judging the rationality of the calculation results of the dynamic torque basic function, the deductive induction method is used to replace the parameters beyond the boundary range with the boundary values of the constraints. Through this heuristic logical reasoning method, the torque can be controlled within each within the allowable range of component capabilities. In the case of moderate braking intensity, the combination of mechanical brake and electric motor brake is used to realize vehicle braking, so that part of the vehicle kinetic energy is converted into electric energy and stored in the battery through the electric motor.

This mode of operation not only reduces brake usage, increases energy recovery, but also prolongs brake life and reduces brake requirements. The vehicle simulation program of the forward simulation method includes a driver model, which considers the demand speed and current speed, to generate throttle and brake commands (usually using a PI controller). The throttle command is converted into engine (and, or electric motor) torque and energy utilization, where the torque generated by the engine is sent to the gearbox model, and then the converted torque is calculated according to the efficiency and gear ratio, which is then calculated according to the actual power flow in the vehicle direction forward. until the driving force of the tire is calculated.

In this Hamiltonian function, the first half of the function is the instantaneous fuel consumption of the engine, the second half is the equivalent instantaneous fuel consumption corresponding to the increase or decrease of power battery power, and the sum of the two parts is the minimum equivalent fuel consumption in real time Optimizing the objective function of an energy management control strategy. By solving the minimum value of the current instantaneous Hamiltonian function, the control variable nVm(t) corresponding to the minimum value is obtained. The principle of determining the operation mode of the whole vehicle is according to the behavior of the driver, take the driver's demand as the starting point. At the same time, regardless of the specific work of each component, control instructions are sent to each component according to the needs of vehicle control.

2.2 Research on control strategy optimization of dual-mode power-split hybrid electric vehicle driving conditions

When the vehicle is running with low battery power or load, to ensure the normal driving performance of the car or maintain the engine working in a high-efficiency area, the electric motor works in power generation mode to maintain the battery power level or increase the engine load to make it Work in the high-efficiency zone, thereby improving energy utilization as a whole. At this time, both clutches C1 and C2 are engaged, that is, when the vehicle speed is lower than 35km/h, the required power is less than 10kw and the SOC of the battery is higher than 0.5, the battery supplies power to the motor U to drive the car, which is in a pure electric working condition; When the battery is lower than 0.5, no matter how low the vehicle speed is at this time, the engine will start; in the acceleration condition, the motor II and the engine drive the vehicle together; in the deceleration braking, the motor II performs energy recovery. In the whole cycle condition, the sum of the torque of the engine and the motor II always meets the requirement of the required torque.

The comparison between the fuel consumption per 100 kilometers and the traditional prototype car (engine displacement 1.8L) is shown in the table below. Compared with the original strategy, under the control of the ECMS algorithm control strategy, most of them operate in pure electric mode under the NEDC urban driving cycle, and only start the engine when the SOC is low, to avoid the engine working under the condition of low power demand of the whole vehicle , thereby reducing the actual fuel consumption of the engine. In suburban working conditions, the engine power basically meets the driving power of the vehicle, and the power battery provides power assist at low and medium speeds, and charges and recovers energy at high speeds. During the research and development of hybrid electric vehicles, static, quasi-static and dynamic analysis are all based on simulation models.

To verify the control mode and strategy of hybrid electric vehicles, and analyze the power performance, fuel economy performance and emission performance of the whole vehicle at the same time, this paper established a simulation platform based on Matlab/Simulink for the target vehicle equipped with the electromagnetic power split hybrid powertrain system. The power of the engine is designed according to the requirements of the stable maximum speed, and when the hybrid electric vehicle is running at a stable maximum speed, the electric motor is not considered to participate in the work, so the hybrid power transmission system still uses the engine of the prototype vehicle. ADVISOR2002 is a simulation software developed by the American Renewable Energy Laboratory under the software environment of Matlab and Simulink. It is currently the electric vehicle simulation software with the largest number of users in the world.

At present, many enterprises and research institutions in the world use this software as a simulation tool to carry out research work, and there are many successful application examples. And the power components in the system were selected, and the forward simulation model of the whole vehicle was established; the required torque of the whole vehicle was defined; according to the working state of the whole vehicle, the mathematical model of the system was decoupled to obtain the solution of the dynamic torque coupling algorithm. Based on the decoupling algorithm of dynamic torque, the torque control strategy of the whole vehicle is designed by deduction and induction, according to the optimized engine model and the oil-to-electricity conversion coefficient calculated by simulation, the equivalent fuel consumption based on the minimum principle is designed. Minimal energy management control strategy. The fuel economy of the engine is relatively good in the medium load and medium speed range, so it is considered that it is more economical to use the pure electric motor drive mode in the case of light load and low speed.

The simulation process of ADVISOR is to calculate the backward path first, and then calculate the forward path. In the backward path, the road cycle module provides the driving trajectory of the car, so the vehicle module uses the vehicle driving force calculation formula to calculate the driving force, and converts it into the torque and speed of the requested wheel in the wheel module, and then delays to the path is transmitted to the upper module final drive, transmission, etc. step by step, until the requested power is distributed to the engine module and battery module according to the scheduling of the control strategy module.

3. CONCLUSION

Based on analyzing the system structure, working principle and determining the vehicle control mode, the control mode is verified based on the NEDC recycling vehicle simulation

model, and the power and economy of the vehicle are analyzed. The results show that: the transmission control mode designed for the electromagnetic power split hybrid power system works normally under various working conditions, and the design and development of the transmission control mode for the electromagnetic power split hybrid power system focuses on the vehicle control mode and the whole vehicle The torque control mode in the control mode is analyzed. The comprehensive efficiency model of the hybrid system in charging and discharging conditions is established; the maximum comprehensive efficiency of the vehicle system is used as the optimization goal, and the optimal control strategy calculation model of the system is established, based on the efficiency models of the engine, motor I and motor II.

4. REFERENCES

[1] Zeng Xiaohua, Wang Zhenwei, Song Dafeng, et al. A parameter matching method for a dual-mode power-split hybrid system: 2019.

[2] Wang Jixin, You Shuang, Li Yan. Dual-mode composite power split hybrid power system: CN204506521U[P]. 2015.

[3] Wang Jiajia. Research on Coordinated Control of Power Split Hybrid Electric Vehicle Based on Time Delay Estimation and Disturbance Compensation.

[4] Jiang Jibin, Wang Zhongxin. A compound power split hybrid power transmission system: CN216184446U[P]. 2022.

[5] Jiang Jibin, Wang Zhongxin. A compound power split hybrid power transmission system and its working method: CN202111139096.6[P]. 2021.

[6] Wang Wen. Development of Control Algorithm for Power-split Hybrid Electric Vehicle Based on System Instantaneous Optimum [D]. Jilin University, 2014.

[7] Song Dafeng, Sun Chuqi, Zeng Xiaohua, et al. A driving mode control method for a power split hybrid electric vehicle: CN201811310953.2[P]. 2020.

[8] Guo Weihua, Gao Tao. Multi-factor comprehensive parametric design method for power-split hybrid electric bus:

[9] Cai Yingfeng, Dou Lei, Chen Long, et al. Coordinated Control Method for Mode Switching of Power Split Hybrid Electric Vehicle Based on Compensated Sliding Mode Control: CN110103948A[P]. 2019.

[10] Yu Haisheng, Zhang Jianwu, Zhang Tong, et al. Research on Transmission Control Mode of Electromagnetic Power Split Hybrid Electric Vehicle [J]. Journal of Agricultural Machinery, 2012, 43(006):1-7.

[11] Qin Datong, You Guoping, Hu Jianjun. Analysis of working mode and parameter design of new power split hybrid power transmission system[J]. Chinese Journal of Mechanical Engineering, 2009, 45(2):8.

[12] Huang Xiaoci, Tang Xiaolin, Yu Haisheng. Noise analysis of power-split hybrid car drive train[J]. Mechanical Transmission, 2013, 37(11):5.

[13] You Shuang, Liu Shaokang, Ma Yuzhe, etc. Compound power split hybrid vehicle transmission system:

[14] Walter Joseph Altman, Bernard D. Neversey, Daniel Scott Colvin. Powersplit Hybrid Powertrains with Overrunning Clutch: 2016.

[15] Liu Donghao. Research on Transient Dynamics of Power-split Hybrid Electric Vehicle Engine Starting [D]. Shanghai Jiaotong University, 2019.

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Change Detection Trend Prediction of Leisure Agriculture and Rural Tourism Based on High-Resolution Remote Sensing Image Classification Algorithm

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Abstract:Domain adaptation algorithms for source and target remote sensing images from the same region are studied. Remote sensing images in the same area are often less different and have strong correlations. This paper analyzes the ideas of getting rich in leisure agriculture and rural tourism under the development of the rural revitalization strategy, and proposes ways to revitalize the countryside and boost the economy, such as accelerating agricultural vocational education and changing the thinking of rural population management. A distance-based local support vector machine algorithm (DLSVM) is proposed. The algorithm compares the distance between the unlabeled sample and the hyperplane with a preset distance threshold. The ultimate goal of implementing the rural revitalization strategy is to continuously improve the participation and benefit of rural residents in industrial development, and completely solve rural problems. Industry and peasant employment issues.

Keywords: Change Detection Trend Prediction, Leisure Agriculture and Rural Tourism, High Resolution Remote, Remote Sensing Image Classification

1. INTRODUCTION

Change detection and trend prediction of leisure agriculture and rural tourism based on high-resolution remote sensing image classification algorithm [1]. The development of leisure agriculture and rural tourism is a major measure to expand agricultural functions in urban suburbs and realize the integrated development of urban and rural areas. In recent years, my country's leisure agriculture and rural tourism have developed vigorously [2]. Driven by market pull, policy promotion, and innovation, the scale of the industry has expanded rapidly, and its driving ability has become increasingly strong. It has become a sunrise industry for wealthy farmers [3], improving agriculture, and beautifying rural areas. In recent years, leisure agriculture and rural tourism have gradually demonstrated the advantages of their sunrise industries. Not only have their scales expanded, but they have also driven other industries due to the promotion of markets and policies [4].

The acquisition of high-resolution ground images is also becoming easier [5]. However, the continuous improvement of spatial resolution and temporal resolution also increases the number of remote sensing images exponentially [6], which brings more and more severe challenges to the processing of remote sensing images. Classical change detection techniques use a single pixel as their basic unit of analysis (pixel-based change detection) [7]. There are different pixel-based change detection techniques, including post-classification, image difference, change vector analysis, principal component analysis [8]. This is the first 10 years of the development of leisure industry and rural tourism in my country. These 10 years are the budding period of the development of this industry [9]. Due to the recent reform and opening up, the development system of leisure industry and rural tourism is not perfect [10].

Proposed by Brailovsky et al. in 1999, by adding two multipliers to the kernel function of the traditional support vector machine [11], it has locality. However, the local support vector machine with multipliers calculates the distance in the sample space, so the performance of the algorithm varies greatly for different data sets [12]. In VHR images, the salt-and-pepper effect will be caused due to the same spectrum of foreign matter and different spectrum of homogenous matter [13]. Another important limitation of classical pixel-level based methods for change detection is the difficulty in modeling contextual information. In recent years, high-performance computing systems and efficient [14] software algorithms have facilitated segmentation and feature extraction of multispectral and multiscale remote sensing images. At present [15], crop identification and classification methods for high-resolution images are mainly divided into pixel-based and object-oriented classification. Traditional pixel-based crop classification methods usually perform supervised [16] classification based on the spectral information of image pixels. Domain adaptation algorithms based on deep learning can be mainly divided into two categories [17].

One is to adapt the source and target domains by reducing the domain disparity loss by combining the loss function and the dissimilarity measure between the two domains. Among them [18], the more representative early algorithms are the domain adaptive neural network and deep domain obfuscation proposed in 2014. With the acceleration of urbanization, the convenience of cities is gradually improving [19], and the overall shape is also changing towards "modernization". In the hearts of many people, the traces of "rural" in the city have almost completely disappeared, and childhood memories can only be found in Find one or two in rural areas [20]. At this stage, the pace of urbanization in my country has accelerated, the economic income of residents has increased, and the consumption structure has begun to change. After solving the problem of food and clothing, urban residents have needs for sightseeing, leisure and tourism [21].

Some rural areas and peasant households close to large and medium cities take advantage of the unique local agricultural resources and environment and characteristic [22] agricultural products. In the second 10 years of leisure industry and rural tourism development, the pace of industrial development has gradually accelerated, because this period happened to be a period of rapid urbanization in my country [23], the consumption structure has undergone earth-shaking changes, and the society has developed rapidly [24].

2. THE PROPOSED METHODOLOGY

2.1 The Change Detection Trend Prediction of Rural Tourism

Finally, the classification results were appropriately revised based on the ground sampling survey information, and the overall classification accuracy reached 95.3%. Liu Bin used the support vector machine method to extract the crop information of rice [25], corn, soybean, potato, flax, wheat and other crops in the study area based on the visible light band information of high-resolution images of UAVs. In the multi-temporal application scenario, the algorithm in this paper aims at that in a set of multi-temporal data, only one image contains some manually labeled labels, and the domain adaptation algorithm is used to generate the classification results of the remaining temporal phases according to the relative order of time.

The algorithm framework in this section mainly utilizes the correlation between temporal phases, and the sample category distributions of two images that are closer in time are more likely to be similar. There is a certain difference between leisure agricultural tourism and traditional cultural tourism, that is, the difference between "actual participation" and "sightseeing experience". According to the conventional tourism mode, tourists focus on enjoying the scenery and understanding the cultural customs of a specific area, in order to increase their experience. It marks that the competent government departments have begun to intervene, actively promote the formulation of leisure agriculture standards and system construction, strengthen government services, optimize the policy environment, and guide the healthy development of the industry.

Through the statistical analysis of the classification results of 4 high-resolution remote sensing images by SVM, it is found that the distribution of wrong samples is close to the hyperplane, and the sample points at these positions are correct if the local support vector machine algorithm KNNSVM is used for classification. higher rate. Object-based change detection methods can subdivide an image into meaningful uniform regions based on spectral properties, shape, texture, size, and topology, then organize them into image objects, and further classify objects into changed and unchanged kind.

2.2 The High Resolution Remote Sensing Image Classification Algorithm

At this stage, the development of leisure agriculture and rural tourism in the country is flourishing and splendid, and the whole industry shows a good momentum of rapid development. This is the third decade of the development of leisure industry and rural tourism, and this period is also the growth period for the development of this industry. In the past 10 years, people's living standards have improved to a higher level. From solving the problem of food and clothing to moving towards a well-off society, the quality of life has been significantly improved. Therefore, people's needs for leisure travel are more urgent. Table 1 summarizes the classification accuracy of SVM for two types of samples whose distance from the hyperplane is less than 1 and whose distance from the hyperplane is greater than 1. It can be seen from the table that the classification accuracy of samples whose distance from the hyperplane is greater than 1 is much greater than that of samples whose distance is less than 1. However, since objects have different sizes and shapes, the results of change detection largely depend on the accuracy of segmentation.

Another challenge of object-based change detection is the requirement to choose an appropriate threshold. The results show that the recognition effect of crop classification mainly depends on the accuracy of the plot boundary, which provides a reference for using the surface unit as the classification object. Given the ever-increasing number of high-resolution spaceborne sensors, multi-view images of the same area are easier to obtain. Using dense matching techniques, it is possible to generate digital surface models with single-pixel resolution. For my country's tourism industry, leisure agricultural tourism can be regarded as a supplement to the traditional tourism model, thereby effectively diverting tourists from holidays.

Therefore, the rural tourism model based on leisure agriculture. With the increase of residents' income, the increase of leisure time, the change of lifestyle, the aggravation of urban diseases, and the call of nostalgia in the prosperous age, my country's leisure agriculture and rural tourism consumption are strong. The development of rural and leisure tourism is an indispensable trend in the future. For the development of leisure agriculture and rural tourism, the government has paid great attention to it and also gave policy support.

2.3 The Leisure Agriculture and Changes in Rural Tourism

In order to further illustrate the distribution of misclassified samples, we count the number of samples in different intervals of the distance of the wrong samples from the hyperplane, as shown in Figure 1, the abscissa represents the distance from the hyperplane. This method neatly avoids separating changed classes from unchanged classes by choosing a threshold, which is often a critical issue in many existing methods. The object-oriented classification method can use the surface object as the classification unit, through the comprehensive detection and extraction of the spectral, spatial, texture and other feature information of the target object and the correlation between the neighboring objects, and based on the fuzzy classification principle, the same classification obtained by the segmentation is analyzed.

The implementation of the rural revitalization strategy requires a lot of human and material resources. In a short period of time, through administrative intervention, it is highly feasible to transfer some talents from the cities to the countryside to help the aborigines in rural areas sort out the elements related to leisure agriculture and rural tourism. People from all over the world excavate the local regional culture, national culture, historical culture, etc., and use the text to cast the soul, use the scenery to paint the soul, and use the emotion to describe the soul. Moving nostalgia, develop and launch a large number of leisure experience products with distinctive features.

3. CONCLUSIONS

This paper proposes an automatic change detection method by combining multi-resolution level set evolution and SVM

classification. The samples are then selected to train the SVM classifier by improving the level set model and applying it to pixel-level change detection. To ensure that the people in rural areas live in a long-term living state of "steady income increase, living and working in peace and contentment". In the process of working towards this goal, farmers should change their own thinking, develop leisure agriculture and rural tourism, and learn to adapt to local conditions, highlight their characteristics, and do a good job of overall planning.

4. REFERENCES

[1]Lu Peng, Zhou Jing, Wang Hongbo. Research on forest land change pattern detection method based on high-resolution remote sensing images [J]. Forestry Survey and Planning, 2018, 43(1):7.

[2] Liu Wei. High-resolution remote sensing image classification based on multi-class feature deep learning [D]. Beijing University of Architecture and Technology, 2019.

[3] Yan Ming, Cao Guo, Xia Meng. Automatic change detection of high-resolution remote sensing images based on level set evolution and support vector machine classification [J]. Journal of Harbin University of Science and Technology, 2019, 024(001):78-84.

[4] Zhang Lan, Wang Ni, Zhu Bingxue, et al. Research on crop classification based on high-resolution UAV images [J]. Jiangxi Agricultural Journal, 2022, 34(2):10.

[5] Yuan Zhou, Guo Haitao, Lu Jun, et al. High-resolution remote sensing image change detection algorithm integrating UNet++ network and attention mechanism [J]. Journal of Surveying and Mapping Science and Technology, 2021.

[6] Ma Yongjian. Research on the classification method of typical crops in high-resolution remote sensing images based on CNN [D]. Shihezi University, 2020.

[7] Luo Zhiling, Zhao Jingchen, Yin Jianwei, et al. A Change Detection Method Based on High Resolution Remote Sensing Image: CN108573276A[P]. 2018.

[8] Yan Xiaohui, Xu Panlin, Zhao Xiaoxu. High-precision change detection method based on high-resolution remote sensing images [J]. Surveying and Mapping and Spatial Geographic Information, 2018, 41(10):3.

[9] Gu Lingjia, Yang Shuting, Ren Ruizhi. A crop classification method based on deep learning for high resolution remote sensing images: CN110287869A[P]. 2019.

[10] Wen Dan. Research on the value accounting of ecological assets of Poyang Hunanji wetlands [D]. Jiangxi Agricultural University, 2019.

[11] Xie Mei, Fu Weifu, Peng Qing, et al. Multi-task learning-based ground object change detection method in high-resolution remote sensing images: CN111582043A[P]. 2020.

[12] Lv Pengyuan, Zhong Yanfei, Zhao Ji, et al. A brief method for detecting changes in high-resolution remote sensing images based on spatial-spectral prior conditional random fields [J]. Journal of Nanjing University of Information Science and Technology: Natural Science Edition, 2018, 10(1):8.

[13] Meng Xiangrui, Zhang Shuqing, Zang Shuying. Remote Sensing Classification of Wetland Community Based on Convolutional Neural Networks and High-Resolution Imagery: Taking Honghe Wetland as an Example [J]. Geographical Science, 2018, 38(11):10.

[14] Yang Xi, Zhang Xin, Guo Haoyuan, et al. Ship target detection algorithm based on multi-source remote sensing images based on invariant features [J]. Chinese Journal of Electronics, 2022, 50(4):887-899.

[15] Xu Xiaodong. Research on the reconstruction and classification algorithm of remote sensing images based on deep learning [D]. Beijing University of Chemical Technology, 2019.

[16] Liu Ziyuan, Chen Fei, Song Kangming. Research on forest land change detection method based on high-resolution remote sensing images [J]. Surveying and Mapping and Spatial Geographic Information, 2021, 44(12):3.

[17] Zhang Han, Li Yangbing. The evolution of land use functions in suburban areas: Taking Haohuahong Village in Huishui County, Guizhou Province as an example [J]. Advances in Geography, 2020, 39(12):14.

[18] Hu Yunlu, Zhang Mingshan. Evaluation of Ecosystem Service Value of Zoige Plateau Wetland in China [J]. Anhui Agricultural Sciences, 2021.

[19] Ouyang Songnan. Cross-fusion change detection method of high-resolution remote sensing images based on IR-MAD [J]. Beijing Surveying and Mapping, 2019, 33(9):5.

[20] Li Guoqing, Bai Yongqing, Yang Xuan, et al. An automatic classification method of high resolution remote sensing image land cover based on deep learning [J]. Journal of Earth Information Science, 2021, 23(9):15.

[21] Yue Zhaoxi, Pan Chen, Guo Gongju. A method for detecting building changes in high-resolution optical satellite remote sensing images based on deep learning [J]. Surveying and Mapping Science and Engineering, 2021, 41(2):9.

[22] Yang Bin. High-resolution remote sensing image change detection based on deep learning [D]. China University of Mining and Technology; China University of Mining and Technology (Jiangsu), 2019.

[23] Wang Yong. Research on scene change detection of high-resolution remote sensing images based on topic model and deep learning [D]. Wuhan University, 2019.

[24] Ren Yan, Zhang Shuting, Wang Hao, et al. Target detection algorithm for high-resolution remote sensing images based on visual saliency [J]. Journal of Shenyang University of Aeronautics and Astronautics, 2020, 37(2):7.

[25] Wang Mingchang, Zhu Chunyu, Chen Xueye, et al. Detection of building changes in high-resolution remote sensing images based on FPN Res-Unet [J]. Journal of Jilin University: Earth Science Edition, 2021.

[26] Wu Haiping, Wen Li, Deng Kai, et al. Automatic change detection of high-resolution remote sensing images based on deep learning [J]. Surveying and Mapping and Spatial Geographic Information, 2021.

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Research on Rural Tourism Development Strategy from the Perspective of Rural Revitalization

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Abstract: With the comprehensive construction of a well-off society in my country, the pace of urban-rural integration construction is accelerating day by day. In this era, the strategy of rural revitalization has been proposed, which has attracted widespread attention from the whole society. How to revitalize the rural industrial economy has become a major research topic in front of many experts and scholars. As a key means of driving rural revitalization, rural tourism can not only revitalize the rural industrial economy, but also promote the prosperity and development of rural culture, bringing people spiritual and spiritual enjoyment. Based on this, based on the background of the rural revitalization strategy, this paper points out the problems existing in the development of rural ecotourism in my country according to the current situation of rural ecotourism development in China, and conducts an in-depth discussion on the development strategy of rural ecotourism under the background of the rural revitalization strategy.

Keywords: Rural Tourism; I Development Strategy; Rural Revitalization

1. INTRODUCTION

The rural revitalization strategy was formally proposed, and after five years of development, it has achieved remarkable results. In this development process, rural tourism has become an eye-catching measure to implement the rural revitalization strategy, and it is also a key starting point to promote all-for-one tourism. It plays a key role in promoting consumption upgrades and adjusting the structural relationship between supply and demand. Nowadays, more and more people are keen to go out of their homes and visit the natural and cultural scenery. The rural tourism industry has developed in an all-round way under this background.

Although the rural tourism industry plays a positive role in the implementation of the rural revitalization strategy, the development of rural tourism is still facing certain difficulties. Therefore, it is necessary to propose targeted solutions to promote the development of the rural tourism industry and promote rural revitalization. At the beginning of 2020, domestic tourism was completely suspended. Since May 2020, the country has begun to restart rural tourism in an orderly manner. By August 2020, leisure agriculture and rural tourism have received a total of about 1.2 billion people, a decrease of 62.50% compared with the same period in 2019.

Secondly, from the perspective of tourism revenue, the operating income of domestic rural tourism has increased significantly in recent years. In 2015, the revenue exceeded 440 billion yuan, and in 2019 the value has exceeded 850 billion yuan. Relevant data show that among the various domestic tourism resources, rural resources account for 70.00%, while the number of tourism participants only accounts for 30.00%, and the proportion of tourism consumption has not yet reached 20.00%. Therefore, domestic rural tourism is still Their broad prospects for development. Rural culture is the precipitation of national culture and historical culture and has irreplaceable historical and cultural value. However, with the modernization of the countryside, rural culture has gradually faded out of people's daily life, and the inheritance of rural culture has encountered a great impact, causing the future inheritance of rural culture to be full of unknowns and crises.

However, with the development of rural tourism, the rural culture that has been gradually forgotten has been discovered and utilized, endowed with new connotations of the new era, and passed on. At the same time, the development of rural tourism has also enhanced people's concept of caring for rural culture, fully recognizing the preciousness of traditional culture, and promoting the inheritance and development of excellent rural culture. Increase the income of local people. In the process of developing rural tourism, local people provide high-quality agricultural products, idle houses, and transfer land by setting up homestays and farmhouses and participate in the development of rural tourism to achieve employment, making industrial income, wage income, and property income The third is to increase the income of the village collective. In the process of developing rural tourism, the village collective increases the income of the village collective by using idle factories and schools to develop tourism. my country's rural tourism industry started late, and the development time is not long, and in the process of development, there are various problems due to the constraints of various factors.

2. THE PROPOSED METHODOLOGY

2.1 Problems Existing in Rural Ecotourism Development

Some rural tourism industries are too small to meet people's increasingly diversified and personalized tourism needs. At the same time, some rural tourism brand building awareness is weak, tourism product homogeneity is prominent, and there is a situation of "one thousand villages". Many rural tourism products under the banner of rural tourism are essentially "farmhouse fun" and "picking garden", which leads to the lack of characteristics of rural tourism. Lack of keen insight to grasp the development dynamics of the tourism market, service awareness and management awareness is relatively weak. If the peers achieve better results, they will rush to follow suit, lack of innovation awareness, and then lead to homogenization problems . From the perspective of tourism demands, tourists have personalized and diversified requirements for tourism products, but rural ecotourism practitioners are relatively insufficient in innovation ability, which makes them unable to fully meet the diverse tourism demands of tourists.

Having talents is the premise of development. To better develop rural tourism, efforts must be made to attract and retain talents in the tourism service industry, continuously inject fresh blood into the rural tourism industry, and let tourism service talents see the stable and good development

prospects of rural tourism. At the same time, it is necessary to continuously improve the infrastructure construction in the countryside, consider all aspects of the countryside, realize the all-round development of all walks of life in the countryside, gradually narrow the gap between the living environment, living conditions, and quality of life between the countryside and the city, and improve the ability of the countryside to attract talents. Attractiveness, improve the status quo of rural tourism development in a virtuous circle.

Rural governance is an important guarantee for rural revitalization, and it is also a guarantee for the development of rural tourism industry. The development of rural tourism should be planned systematically and rationally, coordinate the overall environment of villages and towns, and improve the construction of supporting basic service facilities. At present, a series of problems in the process of developing rural tourism require the supervision and governance of government departments. Government departments should implement standardized management of folk facilities and services, further improve the service quality and level of rural tourism, and create a clean, tidy, and comfortable rural tourism environment throughout the region. Based on departmental regulations. The grass-roots government communicates closely with the village committee to renovate roads, housing, and other infrastructure during the off-season to ensure that tourists can be provided with smooth traffic services and high-quality accommodation services when the peak tourist season arrives.

2.2 The optimal path of rural tourism development under the background of rural revitalization strategy

At the same time, efforts should be made to coordinate the relationship between villagers and tourists and inform tourists of the basic information of different villages. Electronic screens can be set up at the entrance of the village to display village maps, basic information, customs, and taboos, etc., so that tourists can quickly find various places to play. In addition, it can also distribute brochures, connect to service hotlines, build a tourist service center, enthusiastically help tourists answer questions, and bring tourists a good travel experience, thereby forming a good reputation and sustainable development. The grassroots government communicates closely with the village committees to repair roads, housing, and other infrastructure during the off-season to ensure smooth transportation and high-quality accommodation for tourists during the peak tourist season.

In-depth excavations can be made from the aspects of rural folk culture, rural scenery, ecological leisure, cultural and educational value, etc. Different regions form different characteristics, so that the scenic spot develops towards the uniqueness of history and culture, uniqueness of scenery, and uniqueness of food. Enhance the personalized characteristics of scenic spots. Good tourism economic benefits are the preconditions to support the rapid development of rural tourism. However, current rural tourism is still dominated by relatively low-level projects such as flower viewing, fruit picking, and fishing. Although it can attract tourists come, but it is difficult to retain tourists, and it is difficult to form comprehensive tourism benefits.

Suggestions for this: First, improve the basic tourism service facilities related to transportation, accommodation, catering, shopping, etc. in rural tourism spots, such as guiding the development of characteristic homestays with diversified investment themes, strengthening the construction of accommodation hardware facilities, improving the quality of personnel services, and promoting the upgrading of homestays. To meet the needs of tourists to stay and provide material basic conditions. The comprehensive implementation of the rural revitalization strategy is to allow more villagers to share the dividends of development. By increasing the participation of villagers in economic construction, the employment problem in rural areas can be solved and the goal of increasing villagers' income can be realized. To achieve this goal, rural vocational education can be carried out, so that villagers can learn more professional knowledge according to their own needs, to broaden their inherent thinking and improve their abilities.

Ability is the foundation of self-development. It is better to teach people how to fish than to teach them to fish. We should pay attention to the cultivation of villagers' ability. Improve tourism projects, create high-quality tourism projects, and transform and upgrade key tourism projects. Second, create a closed-loop rural eco-tourism business operation model. Increase the promotion of rural eco-tourism through new media such as Weibo, official accounts, and short video platforms, and gradually increase the popularity of tourist attractions. Promote the deep integration of rural eco-tourism and green agriculture, sightseeing and catering and other related industries, and realize the "integration" of catering, sightseeing, accommodation, transportation, shopping, and entertainment. First, in daily operation and management, it should rely on big data and the Internet and other technologies make scientific predictions, respond to different customer needs and emergencies, and provide tourists with good and accurate systematic services in all aspects of clothing, food, housing, and transportation. While improving its own services, it is necessary to establish a tourism service chain with other rural tourism areas, combine with other rural tourism areas, and establish a rural tourism relationship network extending in all directions.

3. CONCLUSION

The development of the rural tourism industry can comprehensively improve the rural economy and contribute to the implementation of the rural revitalization strategy. Our country has a vast territory, and villages in different regions have different natural scenery, cultural customs, and humanistic spirit, which can all become valuable resources for the development of rural tourism industry. This paper proposes to actively change the concept of development, improve the quality of rural tourism services, carry out rural vocational education, and pay attention to financial and talent support. Facing the requirements of the rural revitalization strategy in the new era, rural eco-tourism should further improve tourism development planning and improve the comprehensiveness of employees. Quality coordinated development of ecotourism resources, improvement of infrastructure construction, further innovation of business operation models and other means to promote the high-quality development of rural ecotourism.

4. REFERENCES

[1] Li Hongxia. Research on Rural Tourism Development under the Background of Rural Revitalization Strategy [J]. Rural Science and Technology, 2018(11): 3.

[2] Zhu Changning and Wang Hao. Research on Rural Tourism Supply Chain Integration Countermeasures from the Perspective of Rural Revitalization Strategy [J]. Economic Issues, 2021(12):75-81.

[3] Gao Linjuan. Research on the development strategy of rural tourism cultural and creative industries under the background of rural revitalization strategy [J]. Agricultural Economics, 2022(7): 2.

[4] Liu Fei, Li Huiqing. Research on the Sustainable Development of Rural Tourism in Sichuan from the Perspective of Rural Revitalization Strategy [J]. Economist, 2022(4): 2.

[5] Zeng Xiaoman, Chen Binqing, Qu Jiping, et al. Research on Rural Tourism Development Issues and Strategies under the Background of Rural Revitalization Strategy ——Taking Nakeli Village as an Example[J]. Urban Architecture, 2022(019-004).

[6] Liang Ruonan, Han Yao. Research on the Innovative Path of Rural Tourism Development from the Perspective of "Rural Revitalization" Strategy [J]. China Management Informatization, 2020, 23(6):3.

[7] Dai Yuhong. Research on strategies for developing rural ecotourism under the background of rural revitalization [J]. Farm Staff, 2020, No.664(16):292-292.

[8] Li Zhuohuan. Discussion on Rural Tourism Development Countermeasures under the Rural Revitalization Strategy [J]. 2021.

[9] Chen Chong. Research on rural tourism landscape design in Wuxi from the perspective of rural revitalization.

[10] Hasyati Yasen. Rural tourism construction and development from the perspective of rural revitalization strategy.

[11] Liu Fenghua, Bo Liming, Yu Kanhua. Exploration on the Revitalization Mechanism and Spatial Planning Response of Leisure Tourism Rural Areas in Guanzhong Area from the Perspective of Supply-side Reform[J]. Architecture and Culture, 2018(12):3.

[12] Liu Jianrong, Ji Jing. Research on Rural Public Culture Development Strategies from the Perspective of Rural Revitalization [J]. Journal of Three Gorges University: Humanities and Social Sciences Edition, 2019, 41(4):5.

[13] Yang Meixia. Research on Rural Tourism Development Strategy under the Background of Rural Revitalization Strategy [J]. Rural Economy and Technology, 2021, 32(11):3.

[14] Yang Zhenhao. Research on Rural Tourism Development Strategy under the Strategy of Rural Revitalization [J]. Tourism and Photography, 2022(18):4.

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Real-Time Feedback Data System with 4D Printing in Clothing Design and Manufacturing Collaboration

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Abstract:4D printing is used to carry out the deployment control of the space mechanism, the on-orbit deformation control of the antenna width, the temperature self-feedback control in the space environment, and the on-orbit self-repair. With the rise of cultural and creative industries, the public is paying more and more attention to the cultural innovation design of bamboo products. Taking "bamboo" as the theme, combined with the application carrier, on the basis of inheriting the traditional bamboo weaving skills, the application development of the real-time database system forms the application development of the real-time database system to form the production monitoring and management content of the coal chemical branch company. Try to use modern cultural creative design The method explores the charm of bamboo culture, and extends the basic pattern to the whole set of cultural and creative product design by means of visual translation. The preparation methods and properties of shape memory polymers and their composites suitable for 4D printing are summarized.

Keywords: Real-Time Feedback, 4D Printing Technology, Cultural and Creative Product

1. INTRODUCTION

The 4D printing concept was proposed in 2013 by MIT researcher Skylar Tibbits in collaboration with 3D printer manufacturer Stratasys [1] and 3D design software developer Autodesk. SMPs have the advantages of low density, large deformation, convenient processing, and cheap raw materials. The degree of response to external stimuli can be adjusted by chemical methods [2], thereby realizing the multi-functionalization of materials. Therefore, SMPs are called new smart materials. potential application value.

In today's society, production technology and production technology are constantly [3] developing and improving. In some respects, manipulators have gradually replaced human labor. It can not only be used in actual production, but also can meet the frequent repeated operations in assembly operations; it can also be used for teaching experiments [4]. and scientific research, in the fields of aerospace, deep-sea exploration, and hazardous material removal. During the operation of rotating machinery, there are physical [5] quantities such as vibration, noise, temperature, and pressure. Among them, the vibration signal contains a wealth of operating state information, and is the main signal reflecting the system [6] state and its changing laws. Therefore, the data acquisition of the vibration signal is an important part of the failure analysis and operation trend prediction of mechanical equipment [7].

Umberto Eco proposed explicit signification and connotative signification. Max Benzer and Elisabeth Walter systematically organized [8] the theories of Pierce and Morris and tried to apply them to the study of aesthetic problems. Therefore, the basic theory of semiotics still occupies every corner of life with the advantages of Saussure's signifier and signified [9], lightness and convenience, and the market demand for bamboo woven products is gradually declining. This paper takes the traditional bamboo [10] weaving skills of Wuyi Mountain's intangible cultural heritage as the research object, combines the advantages and characteristics of bamboo materials, organizes, refines and translates [11] the symbols of bamboo weaving utensils, weaving techniques and other elements, and applies them to the design of cultural and creative products to [12] spread Wuyi bamboo weaving. culture. Compared with 3D printing technology, 4D printing technology has an extra "D" [13]. The extra "D" refers to the latitude of time. To be precise, it is a new type of material that can be deformed automatically [14], without any complicated help. The electromechanical equipment can be automatically folded into the corresponding shape according to the pre-designed product and meet the performance requirements [15].

The key to 4D printing is memory alloys. When it comes to databases, by default [16], it generally refers to relational databases, but in fact there are other types of databases that are widely used in production and life [17], such as the real-time databases mentioned, which are used in very demanding, in- In industrial control enterprises with a very large amount of data in industrial production [18]. The cultural and creative industry is to integrate "culture" into product design and "creativity" into products, which has become the key to enhancing product value [19]. The first place where the cultural, creative and creative industry was initiated was the UK. With the gradual disappearance of the labor industry and the technology industry [20], the cultural and creative industry began to emerge, which is different from the previous two industries. 4D refers to the self-assembly of 3D printed objects over time, and t in the broader [21] 4D printing technology is to characterize all the variable parameters implied in the four-dimensional printing material. 3D printing technology originated in the mid-1990s and is a new technology that uses light curing and paper lamination to realize rapid prototyping of objects [22]. The printing device is filled with printing materials such as liquid or powder, and the printing materials are superimposed layer by layer through computer control, and finally a 3D structure is obtained [23]. The control system can adjust the driving parameters according to the data obtained by the sensing system, so as to determine the action of the manipulator.

In the above-mentioned idea of intelligent robot. Data acquisition and feedback [24] control are very important technical links. However, most of these data acquisition systems are open-loop control systems, which lack feedback control of rotor speed. In order to meet the needs of remote network experiment, the computer control of rotor speed must

be realized. Aiming at the above situation, a data acquisition system with feedback control of rotor speed is developed.

2. THE PROPOSED METHODOLOGY

2.1 The 4D Printing Technology

Although the process of 4D printing the structure to realize the change of the letter "MIT" may seem simple, it contains the elements of 4D printing technology: 4D printing technology directly embeds the design into the material, which simplifies the creation process from design concept to physical object, including programmable Smart materials (structures), programming design. The research on 4D printing is still in its infancy, and the rapid rise and development of 4D printing relies on the collaboration of 3D printing equipment, smart materials, and model design.

As shown in Figure 2, 4D printing technology mainly involves four aspects: (1) 3D printing technology, mainly including Fused Deposition Modeling (Fused Deposition Modeling, FDM), Direct Ink Writing (DIW), digital light Processing technology. The traditional weapon equipment manufacturing process is: manufacturing → deployment → use → scrapping, while the 4D weapon equipment manufacturing process is: semi-finished product manufacturing → deployment → on-site shaping → use → recycling → redeployment. The weapons and equipment produced by 4D printing can optimize the attack performance of weapons according to the environment and attack target, thereby improving combat effectiveness. Thirdly, the 4D printing structure needs environmental stimulation to trigger, so that the structure changes according to the program settings. At present, the common trigger media are water, Electric, magnetic, thermal, chemical, etc., to study the triggering mechanism corresponding to different smart materials, can meet the needs of 4D printing for different smart materials and different triggering methods. Thermotropic SMPCs Because the substrate SMPs themselves are thermally responsive, the addition of fillers is generally It will not change the response mode of SMPs, so there are many kinds of fillers that can be added. According to the morphology of functional fillers, SMPCs can be divided into particle-filled and fiber-filled.

4D printing technology can make more weapons and equipment into a folded state, which is convenient for remote maneuvering. At the same time, the semi-finished products printed by 4D will have stronger moldability and environmental adaptability, and it is also expected to reduce the type and inventory of equipment, improve logistics efficiency, and exert stronger combat effectiveness. 4D printing technology is a multidisciplinary interdisciplinary science. , involving optics, electricity, magnetism, heat, chemistry, mathematics, materials and other majors. At present, 4D printing technology is still in the laboratory or conception stage. U.S. invests in research and development of 4D printed combat uniforms.

2.2 The Real-Time Feedback Data System

In the existing intelligent feedback control system. Many researchers use microcontroller programming as the core control part of the whole system: some researchers also use MARC technology. A feedback controller is introduced to achieve differential synchronous control of the system. However, these methods are relatively expensive, and the procedures are more complicated, and they are not universal to most instruments. Because the rotor vibration signal collected by the sensor may be very weak, or contain a lot of noise, or be nonlinear. Therefore, the signal needs to be preprocessed at the front end before entering the acquisition card to minimize the influence of the interference signal, improve the signal-to-noise ratio, and amplify the weak signal output by the sensor.

PIProcessBook is the graphic display interface of OSIsoft's PI real-time database system. It is simple and easy to operate, and can effectively display real-time data and historical data, and store it in other sources of the PI system. In the production process, we can easily use PIProcessBook to create an interactive graphical interface, the display interface can be saved in real time, and can also be shared with others. Some ideas have also been put forward in terms of infrastructure applications, such as the use of 4D printing technology to manufacture self-changing pipes, which have the function of expanding or shrinking pipes, avoiding the shortcomings of traditional pipes with fixed flow velocity, driving motors and valves, and difficulty in changing; through 4D printing The technology manufactures pipes with environmental awareness and self-healing function after damage. The two fingers of the manipulator are controlled by two stepping motors respectively to realize the opening and closing of the fingers. The minimum step is 1 degree. In the control circuit, the single-chip ATMEGA8L is used to program and control the actions of the two stepping motors. It is only necessary to send different instructions to the control circuit through the serial port to control the direction and angle of the rotation of the two fingers respectively.

Due to various electronic interferences in the test environment where the system is located and the influence of the test system itself.

2.3 The Application in Cultural and Creative Product Design Training Environment

Using the signifier and the signified to interpret cultural symbols is helpful to explore the relationship between the product expression layer and the inner layer. Wang Wei interprets the shape and composition of Tujia patterns from the perspective of the signifier: the four plums and the double plums are mostly square and diamond, and follow the symmetrical form. Interpret the color from the point of view: because the Tujia people have the custom of "chasing the white tiger", they "avoid using white" in color. unique characteristics.

Therefore, when designing cultural and creative products based on Zhuang dry fence buildings, certain principles must be met in order to meet the requirements of local cultural and creative design. The elements of life are extracted from the ancients' lifestyle of "drawing water from bamboo troughs"; bamboo slips are the main writing tools before the invention of papermaking, so the image of bamboo slips is used for literary elements to represent the use of bamboo in literature; utensils are mainly extracted from bamboo strips All kinds of production and living utensils made, such as bamboo sieves. Craft elements mainly refer to various handicrafts woven from bamboo. However, the idea of "controller is still like" has not been explained in depth. Signifier and signified can comprehensively interpret symbols, including external representation and internal meaning. However, there are currently "shapes" that use signifiers to interpret forms, and "meanings" that use signifieds to interpret colors, as well as in-depth interpretation of the relationship between signifiers and signifieds. 4.3 Bamboo bag and bamboo fan design Bamboo bag and bamboo fan design apply the growth process

and color gradient of bamboo to series products. Drawing on the surface of the product not only retains the aesthetics of the object, but also spreads the bamboo culture. Take the bamboo bag making process as an example to illustrate. The configuration parameters contained in industrial control data mainly include real-time data and control data.

The real-time data reflects the operation status of the industrial field equipment and can be divided into three switches: simulation, quantity, and volume. Simulations are used to describe data types as integer, floating point data such as temperature, water level, current field, etc.

3. CONCLUSIONS

The development of 4D printing in the future still depends on interdisciplinary research and technological progress in various fields, such as 3D printing technology and smart material science. The inheritance and development of Wuyi bamboo weaving skills have been greatly tested. This topic takes Wuyi traditional bamboo weaving skills as the object, through the research and development of cultural and creative products, cross-border cooperation between intangible cultural heritage culture and creative products, so that the bamboo weaving culture has a richer level of interpretation, and also builds an effective cultural memory and emotional connection for the audience. Only in this way can the Wuyi bamboo weaving skills be truly activated and passed on.

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5. REFERENCES

[1]Gong Shiyu, Hu Yuxia. Research on the application of Jingchu cultural symbols in the design of cultural and creative products [J]. Design, 2019, 32(4):3.

[2] Mo Junhua, Liu Beibei. The application of traditional "hi" culture in the design of cultural and creative products [J]. Packaging Engineering, 2019, 40(22):6.

[3] Zhang Gaofeng. The integration and innovation of traditional patterns in the design of cultural and creative products [J]. Packaging Engineering, 2022, 43(4):4.

[4] Xiao You, Wang Hongliang. Research on the application of local cultural elements in the design of tourism cultural and creative products [J]. Packaging Engineering, 2020, 41(20):6.

[5] Wang Haoran. The innovative application of Guangxi Jing nationality Hajie culture in the design of cultural and creative products under the new media environment [J]. China National Expo, 2020(10):2.

[6] Wang Dan, Wang Wei. The application of semiotics in the design of cultural and creative products [J]. Art Education Research, 2021(16):3.

[7] Huang Shuai, Meng Liqing. On the application of design semiotics in the design of tourism cultural and creative products [J]. Industrial Design, 2018(12):2.

[8] Liu Jie. The application of traditional culture in the design of cultural and creative products [J]. Art Appreciation, 2020(06):87-88.

[9] Xu Yuanyuan, Feng Dan. The application of font design in cultural and creative products: Taking Qiuyushan cultural and creative products as an example [J]. 2022(20).

[10] Yang Yan. The application of traditional auspicious concept in the design of modern cultural and creative products [J]. 2020.

[11] Wang Xuyan. Research on the application of Urad embroidery patterns in the design of cultural and creative products. Inner Mongolia Normal University, 2020.

[12] Tian Shangfei. The application of Zhuang folk culture in the design of cultural and creative products: Taking Gui Xiaochu as an example [J]. Information Weekly, 2020(9):1.

[13] Guo Yanan. The application of Zhuxianzhen woodblock New Year pictures elements in the design of cultural and creative products [J]. Art Education Research, 2019(9):2.

[14] Tian Jing. The application of Han embroidery art in the current creative product design [J]. Art Science and Technology, 2019(9):1.

[15] Chen Jiali. Research on the design of Hongyao tourism cultural and creative products under the integration of culture and tourism [J]. Economics, 2022, 4(6):37-39.

[16] Zigang Yao, Dongyue Gao. Research on the application design of traditional elements in the design of cultural and creative products: Taking Shanghai Shikumen as an example [J]. Engineering Technology Research, 2020, 2(9).

[17] Wu Wei, Li Lijunxiong. The method and practice of narrative design in the design of red cultural and creative products in Hunan [J]. Decoration, 2021(9):4.

[18] Yu Qiong. The application of bronze ornamentation in the design of cultural and creative products [J]. Identification and Appreciation of Cultural Relics, 2021(24):3.

[19] Li Weiping. The application of textile fabrics in the packaging design of cultural and creative products [J]. Chemical Fiber and Textile Technology, 2021, 50(3):2.

[20] Liu Wenhua. Research on the application of Tibetan patterns in the design of cultural and creative products [J]. Footwear Technology and Design, 2021(21):3.

[21] Wang Yitong, Yan Qian, Pang Hui, et al. Thoughts on Design and Application in the Development of Shaanxi Characteristic Cultural and Creative Products [J]. Western Leather, 2021, 43(14):2.

[22] Zhou Tian, Guo Zheng, Zhou Xiaofei. The Application of Font Design in Cultural and Creative Products: Taking Cultural and Creative Products of the Forbidden City as an example [J]. Art Education Research, 2021(22):2.

[23] Zhang Pengfei, Zhou Guangyun. On the application of traditional Chinese opera cultural elements in the design of cultural and creative products [J]. Tomorrow's Fashion: Late Ten Days, 2021(6):2.

[24] Hu Cong, Chen Bin. Innovative application of Qinqiang visual elements in the design of cultural and creative products [J]. Chemical Fiber and Textile Technology, 2021, 50(7):2.

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Multi-Terminal Realization on Construction Engineering Safety and Quality Supervision Integrated Platform Based on Real-Time Image Information Collection Network

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Abstract:In this paper, the whole system is designed as two parts separated from the front and the back. The Android smartphone is used as the hardware platform to realize the information collection, and the centralized processing and persistent storage of the collected data is realized by building a server in the background. According to the characteristics of engineering quality and safety information and the needs of management personnel, mobile terminal technology and Internet of Things technology are applied, software platforms are developed, a mobile terminal-based engineering quality and safety information collection system is established, and practical engineering applications are combined. Strengthen the construction of quality supervision teams, improving professional quality, establishing a restrictive mechanism, etc., and put forward suggestions for improvement.

Keywords: Multi-Terminal Realization, Construction Engineering Safety, Quality Supervision Integrated Platform, Real-Time Image Information Collection

1. INTRODUCTION

Quality control and safety control are the main control contents in the construction phase of construction projects. Whether the quality of a unit project meets the requirements is usually determined by the quality acceptance of all the inspection batches that constitute it [1], and the project safety control is mainly composed of safety inspection and acceptance of sub-item projects that are more dangerous. On September 4, 2014 [2], the Ministry of Housing and Urban-Rural Development held a national video and teleconference on the two-year project quality control action, and issued the "two-year action plan for project quality control" (hereinafter referred to as the "two-year action plan") [3]. In order to promote the construction of national construction market supervision informatization, the Ministry of Housing and Urban-Rural Development took the two-year project quality control action as an opportunity to [4] strive to complete the construction of 31 provincial-level construction market supervision and integrity integration work platforms in three batches before the end of 2015 [5].

The workload is also getting bigger and bigger. If all these tasks are done manually by the staff, there will be a lot of troubles, such as errors occur [6], errors are not easy to be retrieved, files are easily lost, and so on. It will be much better, it can help the staff to work, the workload will be reduced, and the work process will be simplified [7]. The reason for the frequent occurrence of engineering quality accidents is inseparable from the formation process and characteristics of the engineering quality itself. First of all [8], the engineering project has a long construction period. Characteristics, project quality is formed in each stage of the construction process, and each stage of project construction is closely connected, restricted and influenced each other [9]. This paper analyzes the current status of government quality supervision of construction projects at home and abroad by studying the quality supervision and management mode of construction projects [10], put forward the reform thinking of the government supervision and management mode of construction project quality [11].

In view of the new situation of construction industrialization, a new mode of engineering quality behavior supervision [12], engineering entity quality supervision and innovation supervision is proposed. So as to provide theoretical reference for related research, and also provide reference for the improvement of construction project quality government supervision mode [13]. The main functions of the system are: 1) Receive the wireless broadcast signal from the base station, decode the signal in the baseband receiver part of the system, and separate out the calibration point data information that can establish a positioning aid database [14] 2), the system software terminal is completed Data interaction with the baseband. The air interface of GSM adopts TDMA (Time Division Multiple Access, Time Division Multiple Access) technology [15], which simply means that different users are carried by dividing time slots. Each time slot is 0.577ms, and 8 time slots constitute a TDMA frame, that is, the interval for the user to receive the next round of information is 4.615ms [16]. The allocation of TDMA frames and time slots is shown in Figure 2.1. my country's self-developed Beidou satellite navigation system Beidou Navigation Satellite.System, BDS) is the third mature satellite navigation system [17] after the US Global Positioning System (GPS) and Russia's GLONASS Satellite Navigation System (GLONASS) [18].

In actual projects, the personnel who fill in the quality and safety acceptance materials are often not the acceptance personnel [19], and the filling time of the acceptance materials often lags behind the actual acceptance time, which leads to the disconnection between the inspection and acceptance materials and the project [20], which is not timely and accurate, and cannot be true. Reflect on-site engineering quality and safety. Making full use of the achievements of the original "Sichuan Province Construction Project Information Disclosure and Integrity System Management Information Platform" [21], a unified work platform for the integration of construction market and project quality and safety supervision

in the province has been built (hereinafter referred to as the "Integrated Work Platform in Sichuan Province"), completed the data docking work at the provincial and ministerial level [22]. The market share of the construction industry will gradually decrease. As far as the current total supply and demand in my country's construction market is concerned, the number of employees in the construction industry grows faster than the number of investment [23], and the growth of fixed asset investment is lower than that of the number of employees in the construction industry. After joining, with the entry of foreign construction enterprises, the main body of the construction market will increase greatly. The US government believes that in order to effectively control the government's quality management, it must formulate relevant laws and regulations [24].

2. THE PROPOSED METHODOLOGY

2.1 The Offsite Data Center Cloud Backup

The key is to effectively implement the system, to establish the quality awareness of all parties involved in the project, and the government can directly participate in the supervision of the quality of the construction project. The three-tier C/S structure divides application functions into three parts: presentation layer, functional layer and data layer. The solution is to separate these three layers clearly and make them logically independent. The original data layer has been independent as a DBMS, so the key is to separate the presentation layer and the function layer into independent programs, and to make the interface between the two layers concise and clear. The system is not timely enough. The positioning process involves the use of AT commands to exchange information with the base station. At the same time, it is necessary to receive GPS satellite data regularly and reach a certain amount. If the GPS signal cannot be received in a short time, or the received GPS satellite data is insufficient, the GPS satellite data will be received. It will affect the timeliness of the entire positioning process.

According to the main functional requirements of the information collection terminal, this paper divides the information collection terminal into three functional modules: base station information collection module, location information collection module, and data upload module.

2.2 The Innovative Architecture of College Sports Online Training Data

Sharing and tracking management, so as to carry out integrated management of practitioners, practitioners, engineering projects, and credit information, and realize the linkage management of construction market and on-site. For the testing of engineering materials, the contractor is generally responsible for sending it to a nationally recognized engineering quality testing agency for testing. When there is a project quality or a dispute between the owner and the contractor over the engineering materials and construction quality, the quality supervision engineer shall entrust a nationally recognized engineering quality inspection agency to conduct inspection, and the inspection fee shall be borne by the contractor, the owner or the responsible party in the quality supervision company. Establish construction market credit files.

Bad Behavior Recording Applications. In order to strengthen the construction of the integrity system in the construction industry and standardize the construction market behavior, the Ministry of Construction has issued a series of measures for the management of integrity behavior. Through the establishment of the integrity files of the responsible subjects of all parties involved in the construction, the bad behaviors of individuals or enterprises in the process of project construction are publicized, and bad records are formed, and an access and removal mechanism is set up in the engineering field. The data path algorithm mainly collects a certain amount of data (usually hundreds of groups of data) at the point to be measured, separates the multipath information of the signal from the measured data, eliminates the great error in the data, and obtains a representative Signal characteristic information of the signal at the current measurement point.

The MVC pattern was first proposed in the programming language Smalltalk-80 in the 1980s. Because this pattern has the characteristics of low coupling, high reusability, and high maintainability, it has been widely used and is the mainstream design pattern of J2EE. The model layer is the core of the entire system and corresponds to business processing. It mainly completes the data processing of submitted requests and feeds back the processing results to the view layer. The corresponding interface of the view layer is displayed. From the two conversion results, the minimum error of the four-parameter conversion is only 2.04m, and the maximum error is 6.39m; the minimum point error of the correction conversion is 2.63m, and the maximum point error is 5.51m. In contrast, the error interval of the corrected conversion result is small, and the conversion result is stable.

2.3 The Off-Site Data Center Cloud Backup for College Sports

The four-parameter conversion has certain requirements for the conversion parameters. In order to meet the conditions, it is not possible to use all the data to solve the four-parameter solution. In order to solve the problem of untimely security data acquisition, this study proposes a mobile terminal-based security data acquisition system.

When conducting inspections on sub-projects with high risks at the construction site, hidden dangers can be discovered in time, feedback can be reported in a timely manner, problems can be rectified in a timely manner, and a rapid and effective rectification and emergency response mechanism for hidden safety hazards can be established. The competent department completes the approval, supervision, management, and law enforcement supervision of the project, and the enterprise completes its own declaration, filling, and supervision work, and controls the preconditions of the business process according to the relevant laws, regulations and management methods, so as to ensure that the project supervision link is free of charge to the greatest extent. There are no omissions and no omission of project information. The internal supervision content and internal management of the supervisory agency have a relatively fixed scope and relationship. Its organizational structure should be combined with the division of functions and project division of labor, and a matrix organizational structure can be used to ensure internal business contacts. Integrity, and can adjust the supervisory personnel in time according to the number of engineering projects. The construction unit shall contract out the project to a design and construction unit with corresponding qualifications.

It is not allowed to change the construction drawing design documents without authorization. If it is really necessary to change, the change procedures shall be handled in accordance with the regulations. Major changes involving structural safety, use functions, changes in assembly rates, etc., shall be

re-examined by the original drawing review agency. Strictly inspect the prefabricated components closed.

3. CONCLUSIONS

This research has established a new model of engineering quality and safety control based on mobile terminal information collection technology. After the project implementation, preliminary results have been achieved, but it is still being explored and matured. Mobile terminal technology is in the stage of rapid development, and the use of mobile terminals necessary for manpower and combined with this system platform is used to carry out engineering quality. Build an information platform that meets the requirements of the new nature, through the internal management of the information system, establish an information database, and maintain it in time.

4. REFERENCES

[1]Lu Rui, Zhao Junan. Analysis of the impact of the "online teaching" and "da Peng Qingshun, Zhang Yang. Accurate informatization supervision of engineering inspection based on big data of supervision platform [J]. Engineering Quality, 2021, 39(S01):5.

[2] Li Nan, Li Tingyu. Vehicle-mounted multi-function integrated terminal acquisition and uploading device based on public supervision:, 2020.

[3] Ye Shuiyong. Research on integrated terminal security operation and maintenance management of cities and counties based on network access [J]. Northeast Electric Power Technology, 2020, 41(3):4.

[4] Zhou Chao. Design of multi-terminal laboratory monitoring system based on embedded technology and wireless network [J]. Journal of Luoyang Institute of Technology: Natural Science Edition, 2020, 30(1):7.

[5] Zhang Xipeng, Wu Chunguang, Li Guoqiang, et al. Network security monitoring system and method for distinguishing operation command and echo in terminal information collection: CN112636996A[P]. 2021.

[6] Liu Zhe, He Zidong, Jin Jianxin, et al. A construction site supervision system and method based on the integration of terminal acquisition and management: CN112019611A[P]. 2020.

[7] Li Tao, Liu Bo, Ding Huaping. An integrated intelligent roadside information terminal for highway multi-information collection and release:, CN108205893A[P]. 2018.

[8] Guo Jianan. Design and implementation of a mobile platform for coal mine safety supervision [D]. China University of Mining and Technology, 2020.

[9] Fu Zhibo, Yang Hang, Liu Jiahao. Design of network security operation platform based on multi-source heterogeneous sensors [J]. Journal of Jilin University: Information Science Edition, 2022, 40(1):7.

[10] Shi Yi. Design of rainwater collection monitoring software system based on network platform [J]. Journal of Jiangsu Engineering Vocational and Technical College, 2019, 19(2):4.

[11] Zhu Xiaofeng, Qu Gang, Xu Wenge, et al. Integration of urban planning and construction data collection with the Sunhe Township Project as an example [J]. Beijing Surveying and Mapping, 2018, 32(3):4.

[12] Zhang Zeyu, Fan Yao, Xu Qin, et al. Research review of computational optical microscopy imaging technology based on smartphone platform [J]. Infrared and Laser Engineering, 2022, 51(2):36.

[13] Li Tianfeng. Design and implementation of a location-based acoustic environment ubiquitous information collection and analysis platform [D]. Nanjing Normal University, 2019.

[14] Liao Shiyi, Fan Ruixiang, An Yi, et al. Research and application of disconnection fault monitoring technology on high voltage side of distribution transformer [J]. Jiangxi Electric Power, 2022, 46(2):3.

[15] Zhou Xingming. Research on the generation mechanism of the current sag alarm in the power acquisition terminal [J]. Electromechanical Information, 2022(6):4.

[16] Yang Xiaoqin, Zhu Yuquan. Remote Monitoring of Laboratory Equipment Status with Mobile Smart Terminals [J]. Information Technology, 2022, 46(3):6.

[17] Liu Haijun, Reziya Xirefu. Analysis of the application status and teaching effect of micro-lecture model in middle school geography teaching [J]. Journal of Xinjiang Normal University: Natural Science Edition, 2022, 41(1):7.

[18] Yin Guofang, Xu Gaochao, Wang Jun, et al. Construction quality management platform based on data collection of intelligent terminals: CN107784429A[P]. 2018.

[19] Zhang Nan, Zhang Mengyan, Zhang Tuo, et al. Method and system for safety monitoring of terminal equipment boxes on construction sites based on the Internet of Things: CN111031507A[P]. 2020.

[20] He Zhenhong. Network Information Security Supervision System Based on Computer Communication: CN108881234A[P]. 2018.

[21] The inventor will not be announced. Real-time monitoring method and monitoring management cloud platform for prefabricated bridge deck safety based on cloud computing and image analysis: CN112734753A[P]. 2021.

[22] Yang Chengjue, Yang Liuhang, Yu Ting, et al. An IoT-based on-site inspection and management system for construction projects:, 2018.

[23] Yu Lei, Zhu Zheng, Chen Haibin, et al. A terminal online state detection method and system based on power information collection: CN112468592A[P]. 2021.

[24] Chen Liming, Zhang Yu, Hu Hao. Command communication interference effect evaluation system based on radio station information collection terminal: CN111541504A[P]. 2020.

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Research on the Application of Green Building Cost Control Technology Based on BIM Simulation

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Abstract: With the popularity of the concept of "green, energy saving, and environmental protection", green buildings have received unprecedented attention in the construction industry. In the construction of green building projects, cost control becomes a key issue. This paper analyzes the cost control problems existing in my country's green building construction. Based on the application of BIM technology, through the management of the whole life cycle of the project, it proposes some effective control measures for the construction cost of green building projects and strives to achieve While saving energy and reducing environmental pollution, the economic effect of saving money is realized. An office building project is used to demonstrate the feasibility and accuracy of the calculation technology, improve the level of refined management of the green building's operating costs, and provide research references for its subsequent dynamic cost forecasting and intelligent cost control.

Keywords: Green Building; Cost Control, BIM Simulation

1. INTRODUCTION

China's special historical environment has created a great incompatibility between China's economic promotion and environmental development. The rough production method has caused a secondary aggravation of the environmental crisis and hindered further economic growth. If we want to promote the second radiance of China's economy in the wave of globalization, we must start with the key points of China's economy, dissect its roots, and promote economic development and the tortuous progress of China's environmental protection cause. As the core of China's top ten industrial pillars, the construction industry has become the only way for China to step into the rise of a great power. The development of green buildings in my country is in its infancy, and there are few relevant literatures on the cost control of green buildings.

Chen Siqin analyzed the economic benefits of green buildings and pointed out that green buildings belong to the product of external economy, and non-green buildings have external diseconomy . Chang Haixia analyzed the factors affecting the cost of green buildings and pointed out that the whole life cycle cost control management method should be adopted . Zhang Wei and Liao Congping believe that the performance of green building life cycle cost management can be improved by improving the result performance and behavior performance of green building life cycle cost management performance. The building operation cost usually includes facility maintenance fee, facility update fee, building consumption and cleaning fees. However, the existing research on the composition of green building operating costs is not yet clear.

In the "Green Building Evaluation Standards" (GB/T50378-2019, hereinafter referred to as "Green Label"), although there is no description of the operating costs of green buildings, it is pointed out that: green buildings refer to the use of various green the technology saves resources, protects the environment, reduces pollution, and provides people with healthy, applicable, and efficient use of space. It just rightly solves the problem of low implementation in the process of green building construction. The Cloud-BIM cloud platform built by BIM technology, coupled with the strong cooperation of the whole life cycle theory, divides green building projects into five major stages, and uses different software to select the best construction methods, construction materials, and personnel transfer plans according to different stages. etc., to fully cooperate with the high-quality and high-efficiency promotion of green building projects in the whole stage of construction.

From the perspective of effectively and reasonably controlling the cost of green buildings, this paper analyzes the development of traditional green buildings and the problems existing in the project process. Based on using BIM technology, compare the technical advantages and effective control management provided by traditional 2DAUTOCAD technology for the project. Achieve economic benefits under the premise of environmental protection. The calculation of green building operating costs is based on a yearly cycle, which is classified according to the purpose of use, and the operating cost calculation is completed item by item before summarizing, which is convenient for checking the actual annual cost, to optimize and improve the annual cost plan. Research cost is the first cost expenditure in the whole life cycle of a construction project, and it is also the basis for the smooth progress of a construction project. Most of this cost is borne by the owner, who prepares the project proposal.

2. THE PROPOSED METHODOLOGY

2.1 Cost Analysis of Green Building Engineering Based on BIM Technology

The owner set up a project department to conduct market research, conduct a comprehensive investigation of the project's regional prospects, the geomorphic characteristics of the project location and surrounding conditions, project construction content, funding sources, investment channels, etc., to prevent the development of the construction project at the source, and eliminate the unfavorable points of the construction project. early. At present, in my country's construction industry, the means of design and drawing still rely on 2DAutoCAD and manual drawing. For some construction projects with high requirements, the detailed parameters of the precise parts are manually determined, and there are large things, and the accuracy of the horizontal and

vertical section drawings is not high. Lag work and other phenomena are not uncommon. Furthermore, on the project site, due to the mistakes of relevant personnel, errors in the construction schedule, and process errors, the construction period was extended, and the project could not be completed on time.

To realize the efficient input of cost parameter data in cost calculation, BIM digital twin building information and building intelligent operation and maintenance platform should be used. The input data sources can be obtained in three ways: static data can be directly read through the intelligent operation and maintenance platform system The existing model database of the twin buildings is collected; dynamic data can be connected to the BA system database through the intelligent operation and maintenance platform to realize regular and directional data dynamic collection; manual input can be used to improve some cost parameter data that cannot be obtained through the first two, such as, labor costs, other costs, etc. The green building project supported by BIM technology, after the five-stage division of the whole life cycle concept, not only provides advanced technology support, but also makes this proposition into parts, making it more organized and clearer, and clearing the fog to see the moon. It also provides a feasible method for the enterprise to control costs. After the construction of the cost control system in the previous chapter is completed,

This chapter uses the analytic hierarchy process to analyze the cost of each indicator in the five major stages, and obtains the cost impact indicators through rigorous calculation, and ranks them according to their importance. In this way, it provides a starting point for the actual construction work cost control operation. BIM has a wider scope in architectural design, including design scheme demonstration, design creation, collaborative design, building performance analysis, structural analysis, green building evaluation, specification verification, engineering quantity statistics, etc. Compared with AutoCAD, the design effect displayed by the 3D model is very convenient for reviewers, owners, and users to evaluate the scheme, and even directly discuss issues such as constructability, how to cut costs and shorten the construction period on the current design scheme. Through visual operation, the error rate of decision-making by both parties is greatly reduced, saving time.

BIM-based cost estimation can further realize BIM-based green building operation and maintenance cost prediction and control. By analyzing the deviation between the predicted cost and the actual cost, it is judged whether to take control measures to adjust the cost. Taking the adjustment of energy consumption costs as an example, by adding cost control function modules to the BIM-based smart operation and maintenance platform, after docking with the equipment control system, the construction tasks can be completed within the entire life cycle to ensure maximum profit while simultaneously saving resources. Sustainable concept is the core of green building concept. The concept of the whole life cycle divides green building projects into five stages: pre-planning stage, scheme design stage, construction stage, operation and maintenance stage, and demolition and blasting stage, which is more conducive to the deepening of the concept of sustainable development.

2.2 BIM-Based Cost Control Strategy

Therefore, starting from the five major stages, the key points of green construction such as the construction plan, BIM technology selection, and construction cost control of each stage are broken down one by one, and the cost composition and corresponding cost control points of each stage are proposed by comprehensively considering the respective cost targets of enterprises, society, and consumers. , is the winning point for the realization of green building projects. The application of BIM technology solves the biggest problem that plagues construction companies - various collision problems. Before the construction starts, use the 3D visualization of the BIM model to coordinate the design of various disciplines (architecture, structure, water supply and drainage, electromechanical, fire protection, stairs), and check the collision between various professional pipes and the beams and beams in the pipe and building structure. Column collision. Analyzing and simulating construction difficulties such as new forms, new structures, new processes, and complex joints provides a basis for improving design schemes, reducing work delays and improving economic benefits.

The application of BIM improves the communication between the construction party and other parties, and all parties can track the progress in time, reduce errors, and improve quality and economic benefits. BIM-based cost estimation can provide data support for green building operation cost planning. Efficient and comprehensive calculation work can significantly improve the formulation level and execution efficiency of cost planning. Regular cost data accumulation can be achieved by completing comprehensive cost calculations on a regular basis, and comprehensive and clearly divided cost items can better provide support for subsequent operating cost planning. At the same time, the cost plan provides guidance for cost calculation and control work, forming a virtuous cycle. The concept of green building is the soul of its architecture, which is different from traditional construction methods.

During the feasibility study, it is necessary to integrate the green building concept into the initial stage of the construction project and continue throughout. In this way, the concept of green building takes root in advance, which is conducive to making full use of the surrounding environment at the beginning of construction, improving the utilization rate of the environment, and achieving the concept of harmony between man and nature. Early feasibility study is beneficial for enterprises to control costs at the beginning of the whole life cycle. When preparing the feasibility study report, we consider practical issues such as site selection, economic effect, environmental impact, and return on investment from a long-term perspective, and timely control the investment limit to facilitate the design and control of cost control points in the later stage of program design. After the construction party completes the building, make necessary tests and adjustments to the building, and use BIM to generate the as-built model. On this basis, the as-built model is enriched and the operation and maintenance system are established.

Through 3D visualization simulation, the real information model of the building can be obtained, and the spatial information of the building, equipment information and other information can be organically integrated, combined with the operation and maintenance management system to take advantage of spatial positioning and data records, and reasonably formulate operation, management, and maintenance plans, minimize emergencies in the operation process as much as possible. Greatly improve the management efficiency after completion and enhance the economic benefits of the building. Through the empirical application in this project: practiced the BIM-based green building operation cost prediction technology path, and

verified that this technology can better improve the problem of insufficient accuracy of green building operation cost management; by using the smart operation management platform developed based on BIM, quickly obtain intelligent dynamic monitoring data of facilities and equipment and call model static data to achieve rapid calculation of operating costs; through comparison with the energy consumption costs of similar buildings in the park, it is verified that the application of BIM and green building technology can effectively control building energy consumption costs. The operation evaluation of green buildings provides data support.

3. CONCLUSION

After analyzing the current situation of the use of BIM technology and the current situation of green building costs, it points out the adaptability of BIM technology to the life cycle cost control of green buildings. The possibility of using BIM technology to improve the life cycle cost control of green building projects is proposed. Compared with the application of traditional 2D AUTOCAD in green buildings, the application of BIM in the above aspects brings more obvious work and economic benefits to construction projects. The use and promotion of BIM can effectively control the construction cost of green building projects and realize the economic effect of saving money while saving energy and reducing environmental pollution. During the rapid development of my country's construction industry, BIM plays an increasingly important role in the construction industry, and the cost of green buildings will be more effectively controlled.

4. REFERENCES

[1] Hu Jian. Research on the Application of Green Building Design Based on BIM Technology [J]. Building Materials and Decoration, 2015, 000(012):25-25,26.

[2] Lian Qingliang. Research on the application of green building design based on BIM technology [J]. Engineering Technology (Digest Edition) Architecture, 2016(7):00077-00077.

[3] Chen Ye. Research on Calculation and Application of Green Building Operation Cost Based on BIM Technology [J]. Building Economics, 2021, 42(6):4.

[4] Wang Yuming, Li Na, Yang Man, et al. Research on cost control of green buildings based on BIM [J]. Real Estate Guide, 2018, 000(008):233-234.

[5] Cheng Simo. Research on the application of green building design based on BIM technology [D]. Hunan University.

[6] Xu Jinlu. Research on Engineering Management of Green Building Life Cycle Based on BIM Technology [J]. Journal of Jixi University, 2020, 020(011):75-79.

[7] Wang Shanshan. Discussion on the application of BIM in green buildings [D]. Tianjin University.

[8] Yang Chunli. Research on the application of green building design based on BIM technology [J]. Theoretical Research on Urban Construction: Electronic Edition, 2015(30).

[9] Cai Minhua. Research on the application of green building design based on BIM technology [J]. China Real Estate Industry, 2017(9): 1.

[10] Zhang Song. Application Research on Green Building Design Based on BIM Technology [J]. Engineering Technology: Citation Edition: 00306-00306.

[11] Cheng Simo. Research on the application of green building design based on BIM technology [D]. Hunan University.

[12] Zhang Xiaohang. Application research on green building scheme design based on BIM technology[J]. Architecture and Budget, 2015(1):5.

[13] Chang Min. Application Research on Energy-saving Design of Green Buildings Based on BIM Technology [J]. New Technology and New Technology, 2019(1):4.

[14] Liang Dawei. Application Research on Energy-saving Design of Green Buildings Based on BIM Technology [J]. Architecture and Decoration, 2020(9): 0073-0075.

[15] Chen Chijun. Application research on green building scheme design based on BIM technology [J]. Architectural Engineering Technology and Design, 2016.

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Visual Analysis of Strapdown Inertial Navigation Information Model

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Abstract:Visual analysis of tsrapdown inertial navigation information model is studied in this paper. With the increasing demand for the accuracy of strapdown inertial navigation, gravity disturbance becomes the largest residual error of high-precision inertial navigation system. In this paper, the gravity disturbance is quantitatively analyzed according to the intelligent fusion spherical harmonic model. It is then equivalent to the resolution of high-precision acceleration and is a main error source of high-precision inertial navigation system. The Terrain system in Cesium is a technology that also supports the generation of terrains from streaming tile data. It supports two types of terrains, STK WorldTerrain and Small Terrain. We then test the combinations of the mentioned models.

Keywords: Visual Analysis ; Strapdown Inertial Navigation; Information Model; Data Mining

1. INTRODUCTION

In the strapdown inertial navigation system, the calculation accuracy of the carrier attitude will directly affect the system navigation accuracy [1, 2, 3]. Therefore, improving the calculation accuracy of the carrier attitude matrix is an important content of the strapdown inertial navigation system research. Due to the uncertainty of the motion process of the carrier and the non-exchangeability of the limited rotation of the rigid body, the existing attitude algorithm of the core strapdown inertial navigation system will introduce a non-exchangeable error, and reducing the core non-exchangeable error is an effective method to improve the attitude accuracy of the carrier [4, 5, 6].

The inertial device error is generally divided into two parts: constant value drift and random drift [7, 8, 9, 10]. The inertial device constant value error can be effectively compensated, but it will gradually change with time, and the constant value drift will not change every time the inertial navigation system is started. The SINS update algorithm can usually be divided into three parts: attitude, velocity and position update, and the attitude update algorithm is the core, and its solution accuracy affects the navigation accuracy of the entire core SINS system. The existing framework obtains the inertial data output of the carrier by simulating the motion trajectory of the carrier, superimposes the error noise of the inertial device, and iteratively calculates the attitude, speed and position of the object according to the known initial state.

Second-order damping loop, introducing external height information for negative feedback, so as to then realize the positioning of general strapdown inertial navigation. In the SINS/RCNS integrated navigation system, the core indirect sensitive horizon method of starlight refraction is used to obtain high-precision horizon information, and the refraction apparent height obtained by refraction is introduced into the system measurement, and the navigation error caused by the accelerometer offset is corrected. The figure 1 shows the core structure of the ground truth system.

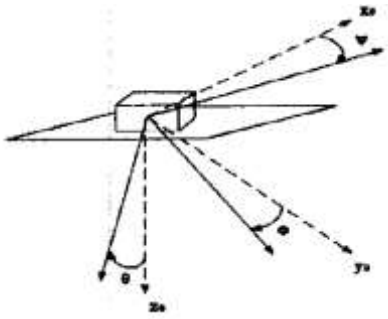

Figure. 1 The Ground Truth of System

For better efficient system construction, the combination of the information system is essential. With the development of science and technology and the continuous improvement of numerical simulation, computer graphics, computer vision, virtual reality and other technical means, the traditional static display can no longer meet the visual needs of the scientific visualization in various fields [11, 12, 13]. The vigorous development of Internet Web technology has provided a brand-new bearing platform for the GIS applications, and launched a brand-new WebGIS technology. Web-GIS uses the Internet as a carrier to reasonably express GIS-related functions, so that GIS services are widely popularized. Users can use GIS service functions as long as they have a device that can connect to the Internet. Hence, with this model, in the following sections, the general model will be defined and studied.

2. THE RELATED WORK

The Cesium as the visual analysis tool is reviewed in this section. The development process of Web 3D has evolved from the early Java Applet to plug-in Flash, Java3D, X3D, Silverlight, to plug-in-free WebGL, and then to the latest 3D graphics engine that encapsulates some common functions of 3D graphics programs [14, 15]. Cesium.js is an open-source front-end JavaScript library that can realize 2D, 2.5D and 3D data visualization on the Web side without plug-ins. It has good compatibility and interactivity for cross-platform browsers and multi-terminal devices. Compared with general WebGL, its development efficiency is higher, the amount of code writing is less, and it has powerful 3D rendering

functions. 3D Tiles is a 3D model tile data structure created by the Cesium R&D team to transmit massive heterogeneous 3D geospatial datasets [16, 17].

The Terrain system in Cesium is a technology that also supports the generation of terrains from streaming tile data. It supports two types of terrains, STK WorldTerrain and Small Terrain. AGI provides ready-made STK WorldTerrain data. For users with convenient network access, this data is the preferred solution [18, 19]. For users with limited access, they can choose to use tools to generate Small Terrain from ready-made DEM data slices to ensure terrain data loading.

3. THE PROPOSED METHODOLOGY

3.1 The Data Visualization Model

Building profile data and height data are the basis for building modeling. In general SketchUp software, push-pull processing can be performed according to the estimated height and the appearance characteristics of the building to construct the model details of the building. In the modeling process, the method of creating components in the software can quickly improve the work efficiency [20, 21].

For buildings with the same appearance, the buildings can be built one by one and saved in SKP format, and finally imported into the model file uniformly. Cesium supports loading 3D models, and supports both gltf format and bgltf format. gltf is an exchange format defined by the khronos organization, used to display 3D content on the Internet or mobile devices, and fully supports the OPENGL, WebGL, OPENGLES graphics acceleration standards; bgltfg is a binary format gltf extension, its binary format reduces the size of the data, Improved network transfer speed [22, 23, 24].

We consider listed focuses.

(1)In practical applications, the point query function is the most commonly used function, which can quickly locate the position of the control point and query related attribute information. Therefore, the query function is particularly important. The system uses the arcgisserver to publish data services, so it is very convenient to introduce the arcgis apiforjs development kit into the system to query data. Esri provides us with the Query Task class, which can realize the query of attribute data, obtain the location of the geometric elements and other related attribute information, and pass it to Cesium to finally realize the geographic positioning of geometric elements and realize the query function.

(2)The process of the projection texture mapping is to calculate the texture coordinates matching each vertex in the model through spatial projection transformation according to the physical parameters of the projection camera, such as spatial position, projection angle, coordinate information, etc., and to find the corresponding texture through the texture coordinate index [25].

(3)At present, spatial 3D model visualization is mostly based on professional software platforms, such as ArcScene, SuperMap, Skyline, etc. These methods have good spatial analysis functions and also display 3D data well, but the disadvantage is that it is not easy to share across platforms, and the cost is high. The 3D model visualization method of the /S framework is convenient for users to operate across servers, and the model rendering effect is relatively better. In the figure 3, the processing circle is defined.

3.2 The Strapdown Inertial Navigation

After adding a damping network to the horizontal loop of the strapdown inertial navigation system, the Schuler period oscillation of the system can be damped, but the Schuler loop of the system is destroyed, which increases the error of the system. In order to overcome the error generated after the introduction of damping, the usual practice is to introduce external velocity information for the compensation, so as to achieve the purpose of both damping and compensating the errors caused by the acceleration and speed of the system. We follow the listed steps for the optimization [26, 27].

The modulation degree of the core positioning error represents the modulation degree of the rotation modulation technology to the positioning error. The larger the value, the better the modulation effect; on the contrary, the smaller the value, the less obvious the modulation effect is.

The positioning error of the general long time rotating strapdown inertial navigation system is mainly measured by the longitude error, while the latitude error oscillates with time but does not diverge.

The longitude error under the static condition of the strapdown inertial navigation system in the definition is the longitude error of the system when the indexing mechanism of the rotary strapdown inertial navigation system does not perform any action, that is, the system is in a static condition.

For the model design, the formula 1~3 define the calculation models.

$$L_{est} = \frac{V_n}{(R_0 + h)} \tag{1}$$

$$\lambda = \frac{V_e \sec L}{(R_0 + h)} \tag{2}$$

$$h = -V_d \tag{3}$$

After the error compensation calculation, the attitude matrix is calculated to obtain the attitude information; the accelerometer component measures the acceleration signals along the three axes of the carrier coordinate system, and after the error compensation calculation, the coordinate transformation calculation from the carrier coordinate system to the navigation coordinate system is performed. Realize navigation Precise demodulation after solving to obtain real carrier navigation information.

Therefore, the rotation accuracy of the rotating ring frame is an important index to ensure the accuracy of the dual-axis rotary inertial navigation system. The main errors of the rotating ring frame are introduced below. For the calibration of inertial device error parameters, the commonly used methods mainly include discrete calibration and system-level calibration. A large number of literatures give detailed research steps and research results for these two methods This chapter studies an accurate modeling method of error parameters using artificial fish swarm algorithm. This method does not rely on high-precision testing equipment, and only needs to meet certain AFSA optimization indicators to achieve accurate fitting of each error coefficient. According to the differential equation (5.18) of the rotation angle of the rotation shaft, the rotation angle position of the rotation shaft can be obtained.

It can be seen from formula (5.18) that the rotation angle is affected by the motor voltage, inductance, resistance and other correlation coefficients, as well as the friction torque. At the same time, the assembly process has limitations, and the correlation coefficient is difficult to keep constant, which limits the stability and accuracy of the rotation angle control. Therefore, the essence of rotation modulation is to periodically change the value of the attitude matrix nbC, so that n bbCε and n The integral of bbCV in one rotation period is as close to zero as possible, so as to reduce the accumulation of system errors and improve the navigation accuracy. Assume that the IMU coordinate system at the initial time is the P system, the IMU rotating coordinate system is the R system, the IMU is installed on the carrier, the IMU coordinate system at the initial time coincides with the carrier system, and the IMU rotates continuously around the POz axis at an angular velocity ω.

4. THE SIMULATIONS

In our experiment, the system receives the synchronization signal command from the core time system module, and immediately sends the attitude data to the time system module. The data sent at this time is the attitude data that the system has already calculated, and there is a delay in the attitude transmitted to the time system module. In the case of navigation demand in a short period of time, the positioning of inertial navigation system is mainly composed of longitude error and latitude error. However, when the inertial navigation system needs to work for a long time, such as navigation and aviation, the latitude error oscillates with time, and the longitude error accumulates and diverges with time. Therefore, under the long-time working conditions, the divergence characteristics of longitude error are mainly considered to evaluate the positioning error of the system.

5. CONCLUSIONS

Visual analysis of general tsrapdown inertial navigation information model is studied in this paper. The simulation analysis and experimental verification both show that the relevant theory of PEMD for the positioning error modulation of the rotary strapdown inertial navigation system is correct, so PEMD is an effective method to evaluate the positioning accuracy of the rotary strapdown inertial navigation system. Hence, this paper procides the novel solutions for the efficient model. In the future study, we will consider the applications.

6. REFERENCES

[1]Hsu, Horng Yi, Yuichiro Toda, Kohei Yamashita, Keigo Watanabe, Masahiko Sasano, Akihiro Okamoto, Shogo Inaba, and Mamoru Minami. "Stereo-vision-based AUV navigation system for resetting the inertial navigation system error." Artificial Life and Robotics 27, no. 1 (2022): 165-178.

[2]Zhou, Zijun, Shuqin Yang, Zhisen Ni, Weixing Qian, Cuihong Gu, and Zekun Cao. "Pedestrian navigation method based on machine learning and gait feature assistance." Sensors 20, no. 5 (2020): 1530.

[3]Zhang, Chuang, Chen Guo, and Daheng Zhang. "Data fusion based on adaptive interacting multiple model for GPS/INS integrated navigation system." Applied Sciences 8, no. 9 (2018): 1682.

[4]Wan, Miao, Zhongbin Wang, Lei Si, Chao Tan, and Hao Wang. "An initial alignment technology of shearer inertial navigation positioning based on a fruit fly-optimized Kalman filter algorithm." Computational Intelligence and Neuroscience 2020 (2020).

[5]Wang, Guangqi, Yu Han, Jian Chen, Shubo Wang, Zichao Zhang, Nannan Du, and Yongjun Zheng. "A GNSS/INS integrated navigation algorithm based on Kalman filter." IFAC-PapersOnLine 51, no. 17 (2018): 232-237.

[6]Du, Binhan, Zhifei Ke, Yuan Zhu, Jianbin Su, and Zhiyong Shi. "Performance analysis for the model-aided inertial navigation system with different vehicle models." Journal of the Brazilian Society of Mechanical Sciences and Engineering 44, no. 3 (2022): 1-13.

[7]Cortés, Santiago, Arno Solin, and Juho Kannala. "Deep learning based speed estimation for constraining strapdown inertial navigation on smartphones." In 2018 IEEE 28th International Workshop on Machine Learning for Signal Processing (MLSP), pp. 1-6. IEEE, 2018.

[8]Chen, Kai, Jun Zhou, Fu-Qiang Shen, Han-Yan Sun, and Hao Fan. "Hypersonic boost–glide vehicle strapdown inertial navigation system/global positioning system algorithm in a launch-centered earth-fixed frame." Aerospace science and technology 98 (2020): 105679.

[9]Shen, Kai, M. S. Selezneva, and K. A. Neusypin. "Development of an algorithm for correction of an inertial navigation system in Off-Line mode." Measurement Techniques 60, no. 10 (2018): 991-997.

[10]Wang, Wei, and Xiyuan Chen. "Application of improved 5th-cubature Kalman filter in initial strapdown inertial navigation system alignment for large misalignment angles." Sensors 18, no. 2 (2018): 659.

[11]Li, Jinqiang, Jie Li, Li Qin, Wei Liu, Xiaokai Wei, Ning Gao, and Yang Liu. "Optimal design and analysis on high overload buffer structure of passive semi-strapdown inertial navigation system." Sensors 20, no. 4 (2020): 1131.

[12]Kaur, Amanpreet, Archana Mantri, and Vipan Kumar. "Design and development of mems sensors based inertial navigation systems for aerial vehicles: A case study." International Journal of Sensors Wireless Communications and Control 10, no. 2 (2020): 179-188.

[13]Guang, Xingxing, Yanbin Gao, Henry Leung, Pan Liu, and Guangchun Li. "An autonomous vehicle navigation system based on inertial and visual sensors." Sensors 18, no. 9 (2018): 2952.

[14]Sun, Yiding, Gongliu Yang, Qingzhong Cai, and Zeyang Wen. "A robust in-motion attitude alignment method for odometer-aided strapdown inertial navigation system." Review of Scientific Instruments 91, no. 12 (2020): 125006.

[15]Jao, Chi-Shih, Yusheng Wang, and Andrei M. Shkel. "Pedestrian inertial navigation system augmented by vision-based foot-to-foot relative position measurements." In 2020 IEEE/ION Position, Location and Navigation Symposium (PLANS), pp. 900-907. IEEE, 2020.

[16]Xiang, Zhiyi, and Jian Zhou. "An In-Motion Alignment Method for Laser Doppler Velocimeter-Aided Strapdown Inertial Navigation System." In Advances in Precision Instruments and Optical Engineering, pp. 323-334. Springer, Singapore, 2022.

[17]Wang, Zuocheng, and Xiaoxian Yao. "Adaptive Friction Compensation Control for a Roll-Isolated Strapdown Inertial Navigation System." In Journal of Physics: Conference Series, vol. 1905, no. 1, p. 012003. IOP Publishing, 2021.

[18]Kalikhman, D. M., Kalikhman, L. Y., Grebennikov, V. I., Turkin, V. A., Akmaev, A. A., Nikolaenko, A. Y., & Gnusarev, D. S. (2018, May). Integrated approach to the development of digital regulators for inertial sensory elements of modern strapdown inertial navigation systems and of corresponding control software. In 2018 25th Saint Petersburg International Conference on Integrated Navigation Systems (ICINS) (pp. 1-4). IEEE.

[19]Zbrutsky, Alexander, and Viktor Trunov. "Forecasting and Compensation of Random Drift of the Micromechanical Gyroscope as Sensors of Strapdown Inertial Navigation System." In 2020 IEEE 6th International Conference on Methods and Systems of Navigation and Motion Control (MSNMC), pp. 11-13. IEEE, 2020.

[20]Jianzhong, Wang. "Research on initial alignment of vehicle strapdown inertial navigation system." The Journal of Engineering 2018, no. 16 (2018): 1629-1636.

[21]Jing, Zhengyao, Jie Li, Xi Zhang, Kaiqiang Feng, and Tao Zheng. "A novel rotation scheme for MEMS IMU error mitigation based on a missile-borne rotation semi-strapdown inertial navigation system." Sensors 19, no. 7 (2019): 1683.

[22]Petritoli, Enrico, and Fabio Leccese. "Navigation Equations, Uncertainty and Error Budget in Inertial Navigation Systems." In 2021 IEEE 8th International Workshop on Metrology for AeroSpace (MetroAeroSpace), pp. 376-380. IEEE, 2021.

[23]Golovan, Andrey. "Inertial navigation in the Earth polar regions with using spatial quasi-coordinates." Mathematics in Engineering, Science & Aerospace (MESA) 10, no. 4 (2019).

[24]Chen, Hua, Tarek M. Taha, and Vamsy P. Chodavarapu. "Towards Improved Inertial Navigation by Reducing Errors Using Deep Learning Methodology." Applied Sciences 12, no. 7 (2022): 3645.

[25]Xu, Yuan, and Xiyuan Chen. "Online cubature Kalman filter Rauch–Tung–Striebel smoothing for indoor inertial navigation system/ultrawideband integrated pedestrian navigation." Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering 232, no. 4 (2018): 390-398.

[26]Wu, Yuanxin, Chao He, and Gang Liu. "On inertial navigation and attitude initialization in polar areas." Satellite Navigation 1, no. 1 (2020): 1-6.

[27]Ahmed, Dina Bousdar, and Kai Metzger. "Wearable-based pedestrian inertial navigation with constraints based on biomechanical models." In 2018 IEEE/ION Position, Location and Navigation Symposium (PLANS), pp. 118-123. IEEE, 2018

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Innovative Application and Research of Flipped Classroom in Vocal Music Teaching Under the Background of Internet +

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Abstract: At present, flipped classroom is a new teaching model in the Internet age. It makes education freer, breaks through the limitations of classroom knowledge teaching, realizes teaching tasks outside the classroom, and strengthens the communication between teachers and students to a certain extent. Taking vocal music courses in higher vocational colleges as an example, vocal music teaching has always adopted the traditional "collective singing" teaching mode, and the efficiency of classroom teaching has not been significantly improved. It provides a new development direction for vocal music teaching in colleges and universities, which not only meets the actual requirements of the new curriculum standard teaching, but also fully improves the effect of vocal music teaching in colleges and universities. Therefore, this paper mainly studies and analyzes the optimization methods and strategies of "flipped classroom" in vocal music teaching in colleges and universities.

Keywords: Innovative application, flipped classroom, vocal music teaching, Internet +

1. INTRODUCTION

In the context of quality education reform, it is necessary to improve the quality of vocal music teaching in colleges and universities by taking a variety of singing styles as the guide, enriching the form and content of vocal music teaching in colleges and universities, and constructing a teaching model of various singing styles of college vocal music. The teaching mode of multiple singing styles of vocal music in colleges and universities is a supplement to the previous single teaching mode, which helps to stimulate students' interest in vocal music learning, cultivate students' core vocal literacy, and then enhance students' artistic accomplishment. The traditional classroom aims at the teacher's teaching of knowledge in the classroom. Teachers teach in the classroom. Through teaching design, they explain concepts, key points, and difficulties, arrange homework after class, and advance teaching progress according to the teaching plan and outline. Compared with "flipped classroom" teaching mode, the teacher's teaching method is fixed and single, the teacher occupies a dominant position in teaching, and the students are relatively passive in learning.

But for students, it is extremely difficult to keep up with the teaching process, and it will lead to students losing interest and will in learning in the long run. Due to the lack of sufficient communication, the relationship between teachers and students deteriorates, and the teaching information cannot achieve two-way circulation, which has a serious impact on the teaching of vocal music knowledge and the improvement of students' own vocal music ability. In the teaching process, a lot of time will be spent correcting the students' basic knowledge. The class time is wasted seriously, the key and difficult points are not highlighted, and the problems are difficult to solve. It greatly affects the effect of classroom teaching. At the same time, the time and quality of students' extracurricular practice cannot be guaranteed, and the lack of supervision is also an important reason for the slow progress of the course and the unsatisfactory professional level of students.

Colleges and universities are building a teaching mode of multiple singing styles of vocal music, changing teaching concepts, adjusting teaching arrangements, respecting the differences of students, carrying out targeted teaching activities for students according to the actual situation of students, and giving students guidance on singing styles during the activities. Then improve the quality of vocal music teaching in colleges and universities. First of all, teachers realize the importance of carrying out teaching activities of various singing styles and change their own ideas. "Flipped classroom" reforms the traditional teaching methods and subverts in-class teaching and extra-curricular teaching. The flipped classroom has changed the roles of teachers and students in teaching to a greater extent, from active to passive, and from passive to active. This is also a major feature of the "flipped classroom".

Through the implementation of "flipped classroom", students' independent learning ability is enhanced, which is a leap from "teaching a man to fish" to "teaching a man to fish". Before starting to teach the new lesson, vocal music teachers should ensure that the teaching plan is pertinent and send it to students through instant messaging applications such as WeChat and QQ. Focus on difficult content, and record the content that cannot be mastered, and communicate with teachers in a timely manner through the application of various application software. Teachers can help students to effectively solve related problems and lay a good foundation for classroom teaching. Vocal music teaching is a combination of theory and practice, but class time is very limited.

2. THE PROPOSED METHODOLOGY

2.1 The application strategy of flipped classroom in the teaching of vocal music under the background of Internet +

On the one hand, the teacher should consolidate the theoretical knowledge of students' vocal music, and on the other hand, they should answer the questions raised by the students. It is very difficult to pass on all the knowledge and

skills to the students in the limited time. With the flipped classroom teaching mode, teachers can set learning tasks for students before class. Students can independently complete this part of the content through videos, and practice and strengthen the content of independent learning in class. Teachers can evaluate students according to their completion, and then individually guide key and difficult issues, and then set new tasks. Colleges and universities have a variety of vocal music in the construction of singing style teaching mode, the traditional vocal music teaching mode is innovated, diversified teaching methods are adopted, vocal music teaching activities are carried out, and the development of students' thinking is paid attention to, so as to achieve the effect of vocal music education.

One is to create a situation. In the teaching of vocal music in colleges and universities, through the creation of situations, the atmosphere of vocal music works can be created to drive students' emotions, so that students can better understand the emotions of vocal music works with their own emotions, and then enhance students' ability to create vocal music works. At the same time, with the help of situation creation, the abstraction of vocal music knowledge is slowed down, and vocal music knowledge is displayed in front of students in the form of pictures and texts, thereby enhancing students' understanding of vocal music knowledge. Vocal music learning must follow the principle of step-by-step, just like the growth of students must go through kindergarten, elementary school, junior high school, high school, and university. It needs to be done step by step in a down-to-earth manner. The organic combination of music, focusing on the experience summary of stage practice, to achieve the perfection of singing skills.

The application of "flipped classroom" in vocal music teaching also needs to follow this principle. It does not mean that we have a universal vocal music teaching concept that can immediately improve our teaching quality. We need to use "flipped in the process of the concept of "classroom" and practical operation, we must use it well, and use it reasonably and selectively in vocal music teaching, so that it can maximize the teaching interaction between teachers and students in vocal music teaching . However, it should be noted that teachers should also pay attention to the situation of students' vocal singing during the classroom teaching process. If the problems encountered by students are inconsistent with the solutions in the video, the teacher should be able to re-optimize the teaching video before class and try to seek common ground while reserving differences. In fact, it requires teachers to be able to combine with the actual singing situation of the students, to give targeted explanations and demonstrations of the problems that occur in their singing, and to carry out targeted teaching on some personalized problems that occur to students, to ensure Learning is fully optimized.

The purpose of vocal music teaching in higher vocational education is not only to help students understand and master rich music knowledge and reserves, but also to teach students how to appreciate a song. More importantly, cultivate students' musical skills and ability to listen and sing, and finally achieve the teaching purpose of cultivating sentiment and improving students' comprehensive quality. Therefore, vocal music teachers should pay attention to the establishment of interactive relationship with students in vocal music classroom teaching. While carefully designing teaching content, they should strengthen teaching activities as much as possible, and guide students to actively participate in classroom teaching activities through flipping the classroom. Create opportunities for students to participate in practical activities, to improve students' independent training and thinking ability, determine the music style that suits them according to their personal characteristics, and enhance students' unique charm of music expression in the subsequent improvement of music knowledge. Strengthen their music literacy and promote the all-round development of students' comprehensive abilities.

2.2 Strengthen feedback and evaluation after vocal music class

Through the development of the group cooperative teaching mode, teachers are guided by questions and themes, leading students to explore, analyze, and think about knowledge, enhance students' ability to perceive knowledge, and then promote students to better understand the connotation of vocal music works. Through the development of group cooperative learning mode, students can complement each other and promote each other, so that students can better master vocal music knowledge. Before each new class, the teacher must make a targeted teaching plan, send the recorded video materials to the students through WeChat or QQ group in time, and supervise the students to watch the video carefully before the formal class, and find the video materials and summarize the problems that exist in the understanding of basic knowledge in students' vocal music courses. At the same time, they sort out and summarize the problems, and then communicate with teachers through the Internet in time. Teachers can solve students' doubts in time, to improve classroom teaching efficiency. In traditional vocal music classes, most of them are performed mechanically step by step, which is a kind of simple teaching of music knowledge and skills that is separated from students' life.

Due to the separation from the students' lives, the students' sense of substitution is not strong, the learning atmosphere is difficult to drive, and emotions and enthusiasm are also difficult to arouse. The situational teaching method pays more attention to drawing materials from students' familiar life and importing them from familiar life situations, to transition to the learning of teaching content naturally and comfortably. Mastering the elements of music is the basis of vocal music learning, just like mastering the natural spelling of English and the calculation ability of mathematics. Infiltrate the teaching mode of various singing styles into vocal music teaching and inject fresh blood into the reform of vocal music teaching.

To enrich the form of vocal music teaching, it is necessary to carry out practical activities of various singing styles. First, develop student entrepreneurship incubation bases. At present, students' innovation and entrepreneurship education has been popularized in all fields of college education. With the help of innovation and entrepreneurship education, a variety of singing style entrepreneurial incubation bases have been developed, and students' awareness of innovation and entrepreneurship has been cultivated, and students' practical ability has been enhanced to promote students' better employment.

Course assessment and evaluation is a means of testing the learning outcomes of vocal music. The traditional vocal music teaching inspection method only stays on the works of students in the final exam. This is a one-sided assessment and evaluation mechanism that only looks at the results and does not pay attention to the learning process. For the assessment and evaluation of vocal music courses under the "flipped

classroom" teaching mode, we should adopt the methods of teacher evaluation, student self-evaluation and student mutual evaluation. In terms of teachers' evaluation of students, teachers should accurately evaluate and record the performance of each student before, during and after each class, including the enthusiasm for discussing questions, the situation of answering questions, and communication with students. Teachers' cooperation is evaluated. While teachers evaluate students, students also need to self-evaluate their performance before, during, and after class to correctly understand their own strengths and weaknesses in the learning process.

Course assessment and evaluation are important ways to test the effect of vocal music learning. The traditional vocal music teaching inspection method is only the evaluation of students' final exam works, which is too one-sided and does not consider the students' learning process at all. After applying the teaching mode of "flipped classroom", in the process of assessment and evaluation of vocal music courses, it is necessary to apply the evaluation methods of teacher evaluation, student self-evaluation and mutual evaluation.

3. CONCLUSION

In general, in the Internet age, the combination of education and information technology has effectively improved teaching efficiency, and teachers should make full use of network platforms to improve teaching quality. Flipped classroom is a popular teaching mode at present. In vocal music teaching, teachers should actively explore effective application methods. Through the application of the "flipped classroom" teaching mode, students' subjective initiative has been fully cultivated, and it can also help students develop good study habits, so that they can achieve better development and achieve certain achievements in the field of vocal music.

4. REFERENCES

[1] Zheng Peng. Innovation and Exploration of Vocal and Music Course Teaching Mode in the "Internet +" Era [J]. Huaxi: Literature and Art Education, 2020, 000(005):P.1-1.

[2] Ren Lidan. Research on Vocal Music Teaching Mode under New Media [D]. Yangzhou University, 2018. DOI: CNKI: CDMD: 2.1018.140866.

[3] Chen Xiaoyan. The application and research of flipped classroom in the teaching of vocal music in preschool education [J]. New Campus (late issue), 2016, 000(006): 93.

[4] Zou Jianjun. Research on the Application of Flipped Classroom in Vocal Music Group Teaching in Colleges and Universities——Take the Vocal Music Group Class of Guangxi University of Science and Technology as an Example [J]. Education: Comprehensive Education Research, 2017:160.

[5] Zhong Jianping, Wang Fei, Guo Weigang, et al. Research and practice of flipped classroom teaching mode under the background of "Internet +"——Taking the course of "Innovation, Entrepreneurship and Career Planning" as an example [J]. Contemporary Educational Practice and Teaching Research , 2019(10):38-39.DOI:CNKI:SUN:FYJY.0.2019-10-017.

[6] Zhang Jianhua. Research on English flipped classroom teaching innovation under the background of "Internet +" [J]. The Road to Talent, 2019(6):1.DOI:CNKI:SUN:CCZL.0.2019-06-073.

[7] Liu Xiaofan. The Transformation and Enlightenment of "Flipped Classroom" on Music Teaching under the Background of "Internet +" [J]. Labor and Social Security World, 2018, 000(003):68-70.DOI:CNKI:SUN:LDBJ.0.2018 -03-054.

[8] Kang Guojing. Research on MOOC teaching mode under the perspective of "Internet +" [J]. Educational Review, 2019(12):3.DOI:CNKI:SUN:JYPL.0.2019-12-027.

[9] Luo Lixia. The Application of "Flipped Classroom" in Vocal Music Teaching in Colleges and Universities [J]. Shanxi Youth, 2019(5):2.DOI:CNKI:SUN:SXQS.0.2019-05-187.

[10] Zhu Pengfei, Yang Hui. Research on the Analysis and Innovation of Higher Vocational Flipped Classroom Teaching Mode under the Background of Internet + [J]. Education Modernization, 2019, v.6(80):116-118.DOI:CNKI:SUN:JYXD. 0.2019-80-046.

[11] Wang Jingting, Zhang Min, Wang Zhenhui. Research on the teaching practice of flipped classroom mode under the background of "Internet +" [J]. Microcomputer Application, 2017, 33(9):4.DOI:10.3969/j.issn.1007-757X .2017.09.005.

[12] Wang Shuang. Application Research of "Flipped Classroom" in the Teaching Practice of Radio and Television Editing and Directing under the Background of "Internet +" [J]. Modern Communication, 2017(21): 2.

[13] Li Xinyao. The application of the flipped classroom teaching model in the teaching of vocal music courses in higher vocational colleges under the background of new media [J]. Journal of Kaifeng Institute of Education, 2018, 38(8):2.DOI:10.3969/j.issn.1008-9640.2018.08.071.

[14] Chen Hui. Vocal Music "Flipped Classroom" Teaching Research in the Internet Education Era [J]. Chinese Literature and Artists, 2020(07):140-141.DOI:CNKI:SUN:ZWNJ.0.2020-07-068.

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Application of Multimedia Technology in Film and Television Post-Production Under the Analysis of Film Aesthetics Paradigm

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Abstract: Movies are a concentrated expression of the aesthetic culture of a specific nation and region in a specific era. In the process of production and dissemination, a certain aesthetic paradigm preference will be formed. Throughout the history of Chinese film development, there are two different preferences for aesthetic paradigms: one is the scientific paradigm preference for film aesthetics under the aesthetics of cultural theory, that is, in terms of film narrative structure and character creation, and so on. To grab the audience, various TV stations are bound to help to display the content more exquisitely. Using computer multimedia technology can make the breadth, depth, literariness, and artistry of the content of film and television works displayed to a large extent. Therefore, the production of modern film and television works, especially post-production, the use of multimedia technology is of great significance.

Keywords: Multimedia technology, film and television, post-production, film aesthetics paradigm

1. INTRODUCTION

Multimedia technology appeared relatively early in our country, and multimedia technology has been applied in related fields in the 1980s. Multimedia technology is an interactive multimedia technology with strong logic gradually established on the original basis of digital computer technology through corresponding information collection, information processing and data storage. In computer technology, one of the hottest technologies now is multimedia technology. With the continuous development of the film and television industry, post-production technology is also constantly developing. Now it has changed from the original traditional post-production to the current multimedia post-production. As early as the end of the 1980s, computer multimedia technology appeared.

This technology refers to the collection, processing, and storage of various multimedia information based on the development of digital technology to form a complete interactive technology with certain logic. In the entire computer field, multimedia technology is the most popular technology. In the post-production process of film and television works, the application of computer multimedia technology is superior to the traditional post-production methods of film and television works. Its advantages are first reflected in the following aspects: one is to reduce the loss of the film storage process. Using computer multimedia technology to achieve all storage and preservation of movie data, the signal quality can meet the requirements, and the complete transmission of captured data is realized. Secondly, using computer multimedia technology to edit film and TV works, the editing time of work becomes more flexible.

Due to the time limit of traditional film works, the editing process of various films is more random and flexible, and the staff can select and edit different content according to the editing needs, making film and TV post-production more convenient and faster. The anti-interference ability is stronger, and the process of storing, copying, and transferring the film during shooting has less impact on the film, which can ensure the integrity of the film to the greatest extent. Malinowski pointed out that culture is a comprehensive concept, which not only includes all social sciences, but also can be used to represent the characteristic ideological values and habits formed by people in an era.

Since 1949, in the process of production and dissemination, many films have focused on expressing the ideology, culture and values of a specific era, while ignoring the value of individual life. Selection and other aspects present a series of characteristics, thus forming the scientific paradigm preference of film aesthetics. Traditional film and television post-production is a linear editing method that requires a lot of time. Computer multimedia technology is different from traditional editing technology. Even if it is displayed during editing, the new technology makes film and TV post-production easier, mistakes can be corrected at any time, greatly improves the efficiency of film and TV post-production and saves editing time.

After 1981, large-scale historical films such as "Nanchang Uprising" and "Xi'an Incident" have appeared on the screen one after another. These films often use major historical events as the background of their creation and strive to reflect the Chinese nation's struggle for independence and liberation while restoring the truth of history. The spiritual quality, perseverance and creative spirit displayed in the process. To restore the real image of history, this type of film often adopts the most acceptable linear narrative structure in terms of structure arrangement, that is, constructs the structure of the film based on the chronological order in which historical events appear. Movies of this type of label and conceptualize historical figures in major historical events, and rarely pay attention to the special feelings of historical figures.

2. THE PROPOSED METHODOLOGY

2.1 The main role of multimedia computer technology in the post-production process of film and television works

Due to the application of multimedia technology, the post-production of film and television works can obtain more vivid

and vivid animation effects through corresponding light and shade processing or corresponding texture processing and can also improve the facial expressions of characters in the work through the application of multimedia technology to achieve the expression effect you want to achieve. It should be noted that through the application of multimedia technology, the production of virtual scenes can be realized in the post-production process of film and television works. The production staff can use their imagination to create a background that fits the plot, realize the integrity of the work, and effectively realize the creation of film and television works. Ideal effect.

On the one hand, screen editing: This work is relatively simple. The producer can change the length and position of the screen at will by dragging the mouse, and can also modify the color tone, slow and fast motion, and then combine image processing software with nonlinear editing software on the other hand, sound editing: in terms of sound production, non-linear editing is roughly the same as traditional production methods, and most of them are discrete production. In the audio workstation, with the help of computer multimedia technology, various routine and special effects can be quickly completed, and at the same time the editing results are applied to the final mixing. Before the final mixing, there can still be separated dialogues, music creation and editing and the picture is always consistent. This is very important for film and television post-production sound production. In film and television production, multimedia technology can enhance the three-dimensional effect of the picture by using light processing and texture processing methods, and adjust the movements and expressions of characters, to achieve good shooting effects.

Since the production of some pictures requires creativity and imagination, virtual scenes are added based on the original pictures to strengthen the effect of film and television works and improve the integrity of film and television works. Today, the film and television production process are inseparable from the application of computer multimedia technology and is gradually moving towards the direction of technology and modernization. The picture cutting technology in multimedia technology is relatively simple, that is, the production staff can change the length and position of the picture through the control of the mouse, and at the same time can realize the modification of color tone or slow and fast motion through corresponding operations, and then combine the corresponding technology software to obtain the desired video presentation effect; the non-linear editing technology used in the sound convenience technology in multimedia technology has obvious differences and advantages from the traditional linear editing technology, and most of the time it uses discrete production.

2.2 Film Aesthetics Paradigm Analysis Film Post-Production Orientation

In the audio production work, we can realize conventional audio processing and sound special effects processing with the help of corresponding multimedia technology, and then mix the edited sound to achieve the ideal sound editing effect. The final key step is to effectively integrate picture editing and sound editing into a whole to ensure the quality of post-production. According to the analysis of the film and television works produced by our country, the level of domestic film and television production is very limited. While great progress has been made in creating shot after shot that we can't see, there are still very few special effects shots in some films. At present, domestic film and television production technology is still relatively backward, and there is still many advanced equipment that cannot be applied; new technology research and development technology is not very high, we must focus on cultivating a large number of high-quality talents who understand technology and art and strive to improve film and television digital production technology.

The application of 3D image technology in film and television post-production is still in the exploratory stage, especially in the production of 3D animation films, the application of this technology can play a vital role. Compared with two-dimensional imaging technology, three-dimensional imaging technology can project characters and scenes three-dimensionally and can choose any angle in the process of film and television shooting to meet the various requirements of shooting to the greatest extent. At the same time, 3D imaging technology can realize the rapid shooting and production of 3D film and television works, and even create more 3D virtual characters to realize the interaction between virtual and reality. The scientific paradigm and the humanistic paradigm preference of film aesthetics are not opposed to each other, but a relationship between the two blending and unifying each other.

Especially in contemporary times, the trend of the fusion of these two aesthetic paradigms is more obvious. Film and television post-production personnel need computers with faster computing speed and stronger image processing capabilities. To meet the needs of related work, related hardware facilities will be developed in a direction that is more convenient and has higher technological content. In addition, the hardware related to storage devices will also develop rapidly to meet the storage needs of film and television works. Hardware with better processing effect and stronger storage capacity has become the main trend of the future development of multimedia technology. Usually, film and television works use images and sounds to narrate, to accurately convey the creator's inner emotions.

Although digital technology can continuously improve the expressiveness of film and television works, it cannot replace human thoughts and feelings. And from the many film and television works created by the United States, it is not difficult to find that the creation of good film and television works is not only because digital technology can provide people with more magical visual effects, but more importantly, the perfect combination of digital technology and storylines, this will make the theme of the film and television works very realistic. The film not only shows Zhou Enlai's noble qualities such as sharing weal and woe with the people and being sympathetic to the people through many detailed descriptions, but also tells the story of Zhou Enlai and Deng Yingchao's couple who wanted to adopt Zhang Erting's child but failed, expressing Zhou Enlai's special emotions. In recent years, the scientific and humanistic paradigms of film aesthetics have been more closely integrated, and even tend to become dominant and mainstream.

3. CONCLUSION

In the post-production of film and television, computer multimedia technology plays a very important role. Although the application of this technology will make great progress, it is also clear that there are still many shortcomings in the application of film and television post-production. Receive better application effect. At the same time, it must express the value of individual life and emotion to achieve the effect of empathy. Under such circumstances, the blending of scientific and humanistic paradigms of film aesthetics and their

integration into the creation of film art is undoubtedly the direction of future film aesthetic paradigms.

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5. REFERENCES

[1] Wu Yingting. Application analysis of multimedia technology in the post-production process of film and television [J]. Science and Technology Innovation and Application, 2016(26):1.DOI:CNKI:SUN:CXYY.0.2016-26-066.

[2] Zhao Shujuan. Application analysis of computer-based multimedia technology in film and television post-production [J]. Computer Programming Skills and Maintenance, 2019(10):3.DOI:CNKI:SUN:DNBC.0.2019-10-048.

[3] Cao Zhi. Aesthetic Review of my country's Digital Films [D]. Central South University, 2010. DOI: 10.7666/d.y1719558.

[4] Jiang Ling. The Value Influence of Chinese Movies "Aesthetics for the People" in the Context of Consumerism——Taking Feng's "Tangshan Earthquake" and other Series of Movies as Examples[J]. Contemporary Literature, 2013(2): 4. DOI:CNKI:SUN:DDWT.0.2013-02-026.

[5] Lin Wei. Constructing a "Beautiful" Life Aesthetics Paradigm--A Case Study of Chinese Urban Films Since the New Century [J]. Chinese Literature and Art Review, 2020(1): 8.

[6] Yan Jiexing. Application analysis of computer multimedia technology in film and television post-production [J]. Computer CD-ROM Software and Application, 2015, 000(001):255-256.DOI:CNKI:SUN:GPRJ.0.2015-01 -146.

[7] Ding Wei. Application analysis of computer multimedia technology in film and television post-production [J]. 2020.

[8] Shan Dan. Application analysis of computer multimedia technology in film and television post-production [J]. Computer Products and Circulation, 2019(6):1.DOI:CNKI:SUN:WXXJ.0.2019-06-005.

[9] Li Dou and Wan Shuliang. An Analysis of the Preference of the Scientific and Humanistic Paradigms of Film Aesthetics [J]. Film Literature, 2022(20):44-46.

[10] Chen Xihe, Nie Wei. Culture, Aesthetics, and Industry of Contemporary Chinese Films [M]. Guangxi Normal University Press, 2011.

[11] Cao Zhi. Aesthetics of Digital Films in my country [D]. Central South University [2023-07-01]. DOI: CNKI: CDMD: 2.2010.187866.

[12] Miao Siyu. Application analysis of computer multimedia technology in film and television post-production [J]. Digital Design (Part 1), 2016(14):206-206.

[13] Gu Tong. Application of multimedia information technology in film and television post-production [J]. 2021.

[14] Bai Jun. Analysis of the application of film and television post-production in film and television works [C]//Proceedings of the 2019 Southland Expo Academic Symposium (4). 2019.

[15] Lian Ying. Image and Reality [D]. Shanghai Normal University [2023-07-01]. DOI:CNKI:CDMD:1.1016.126126.

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Research on the Reform and Innovation of Ideological and Political Education in Colleges and Universities under the All-media Environment

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Abstract: In the era of all media, colleges and universities must pay attention to the ideological and political education of students, guide students to establish correct three views, and make ideological preparations for students to enter the society and realize the value of life in the future. However, how to carry out the work of ideological and political construction in colleges and universities in the era of all media, and how to use the Internet to do a good job in the "third classroom" of students' ideological and political teaching has become a difficult problem for ideological and political teachers in major colleges and universities. This paper analyzes the concept and characteristics of all media and combines the influence of all media background on the reform of ideological and political education in colleges and universities, and studies the innovative path of ideological and political education reform in colleges and universities under the background of all media.

Keywords: Reform and Innovation, Ideological and Political Education, All-media Environment

1. INTRODUCTION

The advent of the all-media era has given everyone the opportunity to speak out, which is undoubtedly beneficial to social development and civilization progress. In particular, the development of self-media has made the channels for people to obtain knowledge and information more diversified. Compared with the single way of obtaining information in the past, this is undoubtedly an improvement, and it is also an important manifestation of the openness of the all-media era. However, everything has two sides. It is precisely because of this openness that it poses a huge hidden danger to the development of socially advantaged teenagers. Omni media has the following four characteristics and uses its own characteristics to exert its value. First, all media achieves maximum information flow integration.

The existing Internet has been updated to 5G. In addition, there are various technical support platforms such as WAP, GSM, CDMA, GPRS and streaming media technology. The communication tools are rich and diverse. In addition to traditional newspapers and magazines, there are also Internet, telecommunications, carrier tools such as satellite communication are the masters of information flow. Second, all media is compatible with traditional media. Omni media improves and innovates traditional media, integrates, and uses diversified media expressions, pays attention to the single form in traditional media, and realizes the "fullness" in "full" media. Reasonable use of modern network information technology for ideological and political education can actively build the "third classroom" of ideological and political education in colleges and universities.

The first classroom of teaching refers to classroom teaching, that is, college teachers reasonably set classroom teaching content and organize teaching activities according to the teaching syllabus and teaching materials. The first classroom of ideological and political teaching refers to the teaching of ideological and political courses. It is the most intuitive means for political teachers to contact college students and teach college students. The second classroom refers to campus culture, school atmosphere, etc. Simply put, it can be considered as everything outside the teaching classroom that is conducive to cultivating students' ideological literacy and improving students' practical ability. The vast number of educators, especially the teaching staff in colleges and universities, undoubtedly provides great convenience and opportunities.

The era of omni-media has promoted the renewal of people's ideas and concepts, so that people's educational and teaching concepts are no longer trapped in the classroom but adopt omni-media teaching. The arrival of the MOOC era also confirms this point. Although the all-media era has brought great convenience to educators, the cognitive rules of students, the internal logic of majors and courses, etc., are the core content and will never change. The internal laws of ideological and political education are even more different. will change. Therefore, colleges and universities in our country should actively carry out the reform and innovation of ideological and political education, shape the healthy psychology of college students, and establish correct values, world outlook, and outlook on life. Second, it is conducive to creating a harmonious society of socialism with Chinese characteristics. Our country takes the rejuvenation of the Chinese nation as its historical task, and the construction of a harmonious society requires the joint efforts of all people. College students are a high-quality talent team and the main force in building a harmonious society. Therefore, colleges and universities should strengthen the reform and innovation of ideological and political education, continuously improve the ideological awareness of contemporary college students, help college students correctly understand a harmonious society, and use the improvement of personal political literacy to promote the improvement of the ideological and political literacy of the whole society.

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2. THE PROPOSED METHODOLOGY

2.1 New Requirements for Ideological and Political Education in Colleges and Universities

In recent years, the use of computer and mobile Internet technology has become more and more extensive, and the society's requirements for talents have become higher and higher. It is required that talents not only have corresponding professional skills, but also have a high ideological and moral level. In this regard, the tasks of ideological and political teachers in colleges and universities are relatively heavy. For the teaching of ideological and political teachers in colleges and universities to really help students improve their ideological and moral cultivation, ideological and political teachers in colleges and universities must innovate teaching methods.

Under the background of the all-media era, the importance of ideological and political education in colleges and universities is becoming more and more prominent, and the problems that arise are also more prominent. The main problems are manifested in three aspects: first, the content is outdated. With the development of the times, the content and requirements of ideological and political education corresponding changes have also taken place, especially in the new era, when the National Conference on Ideological and Political Work in Colleges and Universities was held, many new conclusions were put forward, and higher requirements were put forward for ideological and political educators in colleges and universities. However, some places still use textbooks from many years ago, and the teaching content cannot meet the requirements of the all-media era under the current new situation. The second is that the method is simple. The advent of the all-media era has provided new conditions and requirements for teaching methods and methods. Omni-media provides opportunities for the reform and development of the current education system reform in my country and provides innovative ways for the educational concepts of ideological and political teachers in colleges and universities.

In the current holistic education reform, colleges and universities should combine the information characteristics of all media, adopt high-quality teaching methods, and establish dynamic classroom concept innovation. The reform and innovation of ideological and political education should start with innovating the educational concept of ideological and political teachers. By exploring the source of all-media information, we can efficiently create the concept of ideological and political education and promote the reform of ideological and political education through the application of all-media in education management. Teachers should combine specific ideological and political classrooms, give full play to the advantages of all media, constantly innovate classroom education concepts, improve, and update the teaching thinking of ideological and political teachers, to achieve overall educational reform and innovation. In the era of all media, college ideological and political teachers and college leaders need to pay attention to the development of the network and pay attention to network teaching. Today's era is an era of networking and informationization. Students' ideas have also undergone major changes, and their thinking has been updated. At the same time, information transmission in this era is faster, and various thoughts contained in information all will have a certain impact on students, and these impacts are not all positive and positive, and the values contained in some information even run counter to the mainstream ideology of our country. Students are unable to distinguish right from wrong and are even influenced by these trends of thought. If a worker wants to do a good job, he must first sharpen his tools.

2.2 The Influence of All Media Background on the Reform and Innovation of Ideological and Political Education in Colleges and Universities

With the advent of the all-media era, if the ideological and political education work wants to be innovative, it is necessary to master certain technologies to achieve breakthroughs and innovations. First, we must strengthen learning and training. We must consider training work in a very important position. From teachers to students, we must pay attention to training and learning, and realize the importance of learning from the depths of our minds and realize the harm of not learning. To ensure the smooth development of training and learning work. Secondly, we must strengthen technological innovation. Technology is always improving. If you want to improve the level of ideological and political education, you must adhere to a high starting point and strict requirements. Changes should be regarded as the norm and constantly adapt to changing technological innovations.

The innovation of teaching content is an inevitable choice in the all-media era, and it is also the core and focus of educational reform and innovation. With the gradual development of the "global village" and the continuous progress of my country's social science and technology, ideological and political teachers in colleges and universities should follow the development trend of the times and use all-media information to enrich teaching content to expand students' ideological and political horizons. For example, in the reform of ideological and political education in colleges and universities, the "Four Faith" education is carried out, that is, under the background of all media, the reform of ideological and political education in colleges and universities should strengthen students' trust in the party and the government, confidence in the development of enterprises, and credibility in society, referred to as "Four Faith" education consolidates students' recognition of China's excellent traditional culture. Second, the educational function of the new media platform must be strengthened.

Colleges and universities need to improve and innovate the original new media teaching methods, actively change the network management strategy, and build a "third classroom" based on this, so that it can play its original educational function and allow students to learn more in the third classroom. More ideological and political knowledge, and correctly establish the three outlooks. The advent of the all-media era has brought about a variety of new changes in the work of ideological and political education. The innovation of the ideological and political education model must start from the following aspects: first, we must adhere to the principles and the bottom line. convenience, but there are also many negative factors that will have a negative impact on college students. The premise of system innovation is to adhere to the principle of ideology and adhere to positive energy. Colleges and universities should use social hot spots and current political news to broaden the channels for teachers to understand current political information and emphasize the importance of compound teaching staff.

As an important way to improve the quality of teachers during induction training and on-the-job training, colleges and

universities should provide sufficient funds for teacher training and provide material guarantee for the establishment of high-quality ideological and political teachers. While the society and the government pay attention to educational reform and innovation, they should raise the entry threshold for ideological and political teachers in colleges and universities and use the power of society to increase attention to the quality of teachers. The teacher management and evaluation system are an effective means to improve the quality of the teaching staff. Colleges and universities combine the existing quality of teachers to formulate a reasonable teacher management system and implement regular assessment work according to the development of ideological and political education and the ideological and political level of students, combining the results of assessment work with teachers' daily classroom performance to stimulate teachers' internal drive to carry out educational innovation.

When building this platform, students' thoughts and feelings are fully considered, and teaching is carried out in combination with the actual situation of students' ideological and political education. At this stage, teaching should take students as the main body, and the setting of teaching content should be combined with the actual situation of students. Only in this way can it really help students' ideological and political teaching, and let students have an in-depth understanding of the mainstream ideology of Marxism through this platform. Gradually improve your ideological and moral qualities.

3. CONCLUSION

Entering the all-media era, the ideological and political education work in colleges and universities is facing new situations and new requirements. As an important way to cultivate talents, especially high-level talents, colleges, and universities have undertaken the lofty mission of cultivating people through morality. Therefore, innovating ideological and political education in colleges and universities has practical and historical significance, and we must recognize the necessity of innovation in ideological and political education in colleges and universities. and urgency. The reform and innovation of ideological and political education in colleges and universities should actively innovate the classroom education concepts of ideological and political teachers in colleges and universities, innovate the teaching theory and teaching content of ideological and political education in colleges and universities, innovate the teaching methods of high-quality teachers, and combine the psychological dynamics and ideological fluctuations of college students. Cultivate college students' correct values and comprehensive ideological and political qualities.

4. REFERENCES

[1] Xiao Man. Innovation of College Students' Ideological and Political Education in the Omnimedia Environment [D]. Guangdong University of Foreign Studies [2023-06-17]. DOI: CNKI: CDMD: 2.1015.965481.

[2] Liu Hui. Research on the Innovation of Internet Ideological and Political Education in Colleges and Universities in the All-Media Era——Taking Guilin University of Technology as an Example [J]. Think Tank Times, 2019, 188(20):154-155.DOI:CNKI:SUN:ZKSD.0.2019 -20-098.

[3] Wang Kai. Research on Innovation of Ideological and Political Education in Colleges and Universities in the All-Media Era [J]. Popular Literature and Art, 2021, 000(009): 158-159.

[4] Li Jing. Research on Campus Culture of Innovation and Development of Ideological and Political Education in Colleges and Universities under the New Media Environment [J]. 2021.DOI:10.12249/j.1005-4669.2021.12.272.

[5] Huang Lihua. Discussion on Integrating Ideological and Political Education into College Students' Innovation and Entrepreneurship Course Design under the New Media Environment [J]. Computer Products and Circulation, 2018(6):1.DOI:CNKI:SUN:WXXJ.0.2018-06-134.

[6] Liao Shengwu. Journalism and communication teaching under the environment of media convergence [M]. World Book Publishing Company, 1900.

[7] Guo Fengying. Reform and Innovation of Ideological and Political Course Teaching for Graduate Students in the Omni-Media Era [J]. Henan Education: Teacher Education (Part 2), 2021(10): 2.

[8] Wang Qianyu. Value Realization and Innovation of Ideological and Political Education in the New Era——Comment on "Research on the Reform and Innovation of Ideological and Political Courses in Colleges and Universities under the Media Convergence Environment" [J]. Chinese University Science and Technology, 2022(6): 1.

[9] Wu Ying. Reform and Innovation of Ideological and Political Education in Colleges and Universities under the Background of Informatization——Comment on "Exploration of Innovation in Ideological and Political Education for College Students in the All-media Era" [J]. Science and Technology Management Research, 2021, 41(23): 1.DOI: 10.3969/j.issn.1000-7695.2021.23.035.

[10] Zhang Wenjia. Research on the Innovation Path of Ideological and Political Education Reform in Colleges and Universities under the Background of All Media [J]. Journal of Hubei Open Vocational College, 2022, 35(10): 3.

[11] Yang Yun, Xie Bingbing. A micro-exploration of the recessive education of ideological and political work in colleges and universities under the new media environment [J]. Journal of Jilin Engineering Technology Teachers College, 2018, 34(2):3.DOI:10.3969/j.issn .1009-9042.2018.02.002.

[12] Deng Guangguang. Exploration of Ideological and Political Education in Colleges and Universities under the New Media Environment [J]. Think Tank Times, 2018(5): 2.

[13] Zhang Min. Research on Ideological and Political Education Innovation from the Perspective of Aesthetic Education [D]. Shandong University, 2016. DOI: 10.7666/d.Y3032560.

[14] Zhao Yuefeng. Research on Innovation of Ideological and Political Work in Colleges and Universities in the All-Media Era [D]. East China Normal University [2023-06-17]. DOI: CNKI: CDMD: 2.1012.274506.

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Research on the Cultivation of Students' Innovative Ability in Physical Education Teaching in Colleges and Universities Under the Environment of Information Technology

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Abstract: In college physical education teaching, how to cultivate students' innovative ability has become a new topic of higher education. Review the current situation of physical education teaching in colleges and universities, examine its existing problems in cultivating students' innovative ability, and on this basis, research and cultivate students' innovative ability. The method of cultivating students' innovative ability is explored in terms of college physical education teaching objectives, classroom structure, teaching content, teaching means, teaching methods, competitions inside and outside the class, extracurricular activities, and teaching staff.

Keywords: innovative ability, physical education teaching, information technology

1. INTRODUCTION

In today's world, the development of science and technology is advancing by leaps and bounds, and the era of knowledge economy is coming quietly, and it is changing human society and people's way of life and thinking with great power. Knowledge innovation, technology innovation, management innovation, system innovation and concept innovation have become a huge driving force for promoting social progress. On the premise of adhering to educational innovation and deepening educational reform, the development of school physical education needs more innovation. By updating concepts, adjusting structure, creating environment, paying attention to students' mental health, cultivating students' creative thinking, and cultivating high-quality and high-level creative talents for social development.

Ability refers to the psychological characteristics that are necessary for a person to successfully complete a certain activity and directly affect the efficiency of the activity. A person's ability is always formed and developed in activities and is expressed in activities. In addition, ability is a prerequisite for a person to successfully complete a certain activity, and the strength of ability determines the efficiency of an activity. At present, many physical education teaching methods in colleges and universities still stay in the simple teaching of sports technology and basic skills mastering, ignoring the improvement of students' quality and related abilities. The teaching content is outdated, and the teaching method lacks systematization. Teaching content is the key to achieve training goals and improve the quality of talents.

Our country's school physical education ignores the individual differences of students, lacks pertinence, does not match the current quality education, and seriously affects students' innovative ability. Nowadays, cultivating students' innovation ability in colleges and universities is the guiding ideology that requires the transformation from the previous skill education to the development of basic activity ability. Innovation ability not only requires students to complete imitative exercises, but also requires students to generate new ideas in the process of practice, so that students can give full play to their creative potential, to further cultivate and stimulate creative thinking. Quality education attaches great importance to the development of students' intellectual potential, and never regards students as receivers of knowledge. Therefore, without the cultivation and development of innovative ability, there cannot be quality education in the true sense. Cultivating students' innovative ability is the core of quality education, and it is also the need for talents in the future development of social knowledge economy.

The traditional college physical education teaching structure emphasizes the dominant position of teachers in teaching, and students are passively receiving signal education in the learning process, ignoring the importance of students' innovative ability, intelligence, and non-intellectual factors (motivation, interest, emotion, will) in learning. The teaching method mostly adopts a single mode of "explaining——demonstrating——practicing——correcting mistakes——consolidating and improving", which limits the cultivation of students' initiative and innovative ability. The reform of physical education teaching in colleges and universities should pay attention to the innovation of classroom teaching structure and teaching methods. Classroom teaching is the main channel to cultivate students' innovative ability, and the reform of teaching methods is the key to cultivating students' innovative spirit and ability.

2. THE PROPOSED METHODOLOGY

2.1 The Basic Methods and Ways of Cultivating Students' Creative Ability

For many years, physical education in my country has been mainly taught by teachers to students by word of mouth, while students obeyed the teacher's orders and did not dare to go beyond the rules, forming a stereotyped "explain-demonstrate-drill-correct-re-practice" model. Some people Call it "cramming" teaching. The theoretical knowledge and skills taught in such old-fashioned teaching are far away from physical practice. How can this kind of teaching motivate

students to learn? Students live in the "frame" set by the teacher all day long, facing outdated ideas and backwardness. From the point of view, how can students talk about innovation in such an environment? The main body of cultivating innovation ability is students, and the active thinking of students depends on their interest in teaching materials and learning and practice process, and on the active participation of students. Teachers should creatively create a relaxed, harmonious, and democratic teaching atmosphere, change the role of the main body, adjust the position of teaching and learning, and provide students with a good learning environment.

Teachers are role models for students to learn, and teachers' innovative thinking has strong inspiration and promotion for students. Therefore, to cultivate students' innovative ability in physical education, teachers must first become a person full of personality and innovative spirit. In classroom teaching, it focuses on stimulating students' imagination, encouraging emotional investment, allowing students to boldly innovate assumptions, and at the same time focusing on cultivating students' creativity and innovation consciousness. The development of students' innovative habits is inseparable from practical activities again and again, and there should be no excessive interference and premature judgment during teaching. Students' innovative thinking is gradually developed in the process of continuous trial and continuous correction. Continuous accumulation can stimulate students' fun of exploration and emotional experience of success or failure. Einstein once said: "Imagination is more important than knowledge".

Imagination is the most dynamic aspect of thinking activities. It is conducive to breaking the stereotype of thinking and opening a new world. It is an important factor in cultivating students' innovative ability. Therefore, teachers should pay attention to combining the characteristics of physical education in teaching and adopt different methods to cultivate students' imagination. Teachers can design scenarios to enrich students' imagination and create good conditions for the development of imagination; they can also develop students' curiosity and a wide range of hobbies, and gradually open the door to imagination, thereby developing students' imagination. Divergent thinking is the innovation of students the main components of ability, but the teaching of divergent thinking methods cannot be explained clearly in a few minutes in the warm-up activities.

Divergent thinking and creative personality are only two main aspects of innovation ability, and the role of other factors of innovation ability in physical education teaching cannot be ignored. Only by choosing a special time to explain in a targeted manner can it be possible for students to master it better. In 1992, the state education commission promulgated the "national ordinary colleges and universities physical education curriculum teaching guidelines", which stipulates that the hours of physical education theory in ordinary colleges and universities should not be less than 12% of the total hours. Excavating the creative factors in teaching materials, from the perspective of cultivating students' innovation, inducing students' innovative thinking, innovative consciousness, and innovative ability, and laying a solid foundation for innovation.

2.2 Strategies to Cultivate Students' Innovative Ability

Teachers should guide students to question boldly, encourage them to seek differences, inspire students' divergent thinking, inspire students' association and imagination, break through the shackles of traditional concepts that teachers teach and students learn, and give students space to create, imagine, and think. The so-called reverse thinking is to think about problems from the opposite angle to conventional thinking. Most inventors like to look at problems from a unique perspective and have the habit of reverse thinking and divergent thinking. They do not play cards according to common sense, and their ideas seem strange or even ridiculous to ordinary people. However, it has been proved that many inventions and creations are produced according to reverse thinking. In physical education teaching, we can also cultivate the habit of reverse thinking as a breakthrough point to introduce teaching, to achieve the effect of winning by surprise. For example: when teaching the back-style high jump, you can teach the students to cross the pole first, and then teach the run-up to take off.

Because the students are most impressed by the teacher's "moving over the pole" and are eager to try, the teacher seizes this opportunity to make the best use of the situation to teach, and it is easy to obtain the best teaching effect. In physical education teaching, we should completely break the routine, emancipate the mind, respect the individual rights, and wishes of students, maintain personality equality with students, and strive to form a good teaching-learning relationship between teachers and students, so that students can learn in an independent and harmonious classroom atmosphere. Carry out physical exercise in the middle of the day, truly stimulate students' interest in sports, make students feel satisfied and fulfilled, gradually form a love for sports, establish a healthy thought of lifelong sports, and develop the habit of lifelong exercise. The concept innovation of college physical education teachers is the premise of cultivating students' innovative ability.

Physical education teachers should regard innovative education as the core of physical education teaching and strengthen the study and research of modern educational theories. Renew the concept, change from teacher-oriented to student-oriented, from "teacher" to "educator", the knowledge structure and ability structure of college physical education teachers should be continuously improved and updated, cultivate students' innovative ability, and stimulate students' curiosity desire and desire to create, guide students to associate, imagine and innovate. Divergent thinking refers to the way of thinking that solves the same problem and strives to conceive from different angles, find different solutions, explore multiple answers, and finally solve the problem satisfactorily. In physical education, teachers should train students' ability to diverge thinking purposefully and in a planned way.

Teachers can cultivate students' divergent thinking by creating problem situations and asking questions. For example, when teaching slam dunk techniques, teachers can ask students: What are the ways to slam dunk? Inspire students to discuss boldly, express their opinions, and let them think about and solve this problem based on their usual experience accumulation. In physical education teaching, we must have a sense of innovation, actively introduce new teaching content, explore new teaching methods, reform the traditional injection teaching methods and corresponding examination methods, implement heuristic and discussion teaching methods, and encourage students to think independently. In the preparation part of the class, students take turns to organize preparation activities to cultivate students' creative and organizational skills. In terms of teaching content and methods, students are

encouraged to speak and debate in the classroom, and ideas, methods and means such as learning-guiding sports, discovery sports, happy sports, and life-long sports are introduced into the classroom, which not only enriches the teaching content, but also develops students Think and create imagination.

3. CONCLUSION

The new concept of physical education teaching innovation is not only a breakthrough and transcendence of traditional physical education teaching, but also an inheritance and promotion of the innovative essence of traditional physical education teaching. The purpose of higher education is to cultivate talents, especially creative talents, and physical education is no exception. In the process of realizing this innovative goal, all physical education teachers need to establish a strong innovative concept, fully coordinate various factors in teaching, and create a democratic atmosphere. Innovation can bring fresh vitality to physical education teaching, and it is of great significance to comprehensively improve the comprehensive quality of students. Cultivating and cultivating many innovative talents is the new historical mission of school physical education, and it is the new historical mission of every college physical education. The unshrinkable duties and obligations of teachers.

4. REFERENCES

[1] Jiang Di. Research on the method of cultivating students' innovative ability in college physical education teaching [J]. Journal of Nanjing Institute of Physical Education (Social Science Edition), 2006, 20(003):85-87.DOI:10.3969/j.issn. 1008-1909.2006.03.026.

[2] Ling Yuehong, Wei Shihai. Research on Cultivating Students' Innovative Ability in College Physical Education Teaching [J]. Hubei Sports Science and Technology, 2003, 22(4):3.DOI:10.3969/j.issn.1003-983X.2003.04.055.

[3] Liu Congmei. Research on the teaching mode of "independence-cooperation-creation and innovation" in college sports under the background of "Internet +" [J]. Chongqing and the World, 2016(46):3.DOI:CNKI:SUN:CSXS.0.2016-12 -040.

[4] Zhao Xinmin. Research on "multi-dimensional, digital" teaching of college physical education under the background of "integration of sports and education" in the new era [J]. Sports Science and Technology Literature Bulletin, 2022, 30(1):5.

[5] Ji Yatai. Experimental research on the application of the "four-link" teaching model in the public sports football class of colleges and universities in Inner Mongolia [D]. Inner Mongolia Normal University, 2014.

[6] Li Pei, Ye Qiang, Yang Chen. Teaching reform and exploration of sports virtual simulation experiments under the perspective of sports and medical integration [C]//The Eleventh National Sports Science Conference.0[2023-06-17].

[7] Jiang Di. Research on the method of cultivating students' innovative ability in college physical education teaching [J]. Journal of Nanjing Institute of Physical Education: Social Science Edition, 2006, 20(3):3.DOI:CNKI:SUN:LJTB.0.2006-03 -025.

[8] Tang Xiaohe. Research on the combination of high school physical education and information technology [J]. China Educational Technology and Equipment, 2013(28):77-78.DOI:CNKI:SUN:ZJJB.0.2013-28-048.

[9] Chen Changhong. Research on the Cultivation of Students' Innovative Ability in Junior High School Information Technology Teaching [J]. Digital World, 2018, 000(012): 101. DOI: 10.3969/j.issn.1671-8313.2018.12.098.

[10] Fan Bo. Research on the cultivation of students' innovative spirit and practical ability in primary school information technology teaching [J].[2023-06-17].

[11] Liu Chao. Research on the cultivation of students' innovative ability in college physical education teaching [J]. Fujian Sports Science and Technology, 2008, 27(2): 2. DOI: 10.3969/j.issn.1004-8790.2008.02.019.

[12] Zhang Hua. Experimental Research on Inquiry-based Teaching Mode in Tennis Special Courses in Colleges and Universities under the Background of Information Technology [D]. Southwest University [2023-06-17]. DOI: 10.7666/d.y1882723.

[13] Li Ling. Research on the application of flipped classroom in college physical education under the environment of information technology [J]. 2021.DOI: 10.12270/j.2095-588X.2021.04.107.

[14] Zhang Shifeng. Research on the Cultivation of Students' Mathematical Innovation Ability in the Information Technology Environment [J]. Good Parents, 2018(24): 1.

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Live Inheritance and Innovative Development of Handicraft Intangible Cultural Heritage from The Perspective of Cultural and Tourism Integration

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Abstract: With the acceleration of the modernization process, the intangible cultural heritage of traditional handicrafts is facing the problem of talent gap, and colleges and universities try to adopt the modern apprenticeship system to solve the mode problem of the integration of the modern education system and the inheritance of traditional handicrafts. Analyze the status quo of the inheritance of traditional residential building skills, and reform the form of teaching based on the applicability of the modern apprenticeship system; give full play to the advantages of the Internet, the market, and the government in promotion and dissemination; rationally use new technologies to inherit the superb skills of the predecessors and inspire future generations youth emerges from blue; constantly strengthen exchanges and cooperation, learn from the experience of domestic and foreign counterparts, and open up a new development pattern. In addition, to further ensure the healthy development of folk traditional handicrafts, basic measures for building a good "big industry" ecology have also been sorted out.

Keywords: Live inheritance, innovative development, handicraft intangible, cultural heritage, cultural and tourism integration

1. INTRODUCTION

"Intangible cultural heritage" refers to intangible cultural heritage, which is widely distributed in various countries around the world, and is colorful due to differences in nationality, geography, history, humanities, and times. In recent years, my country has made great efforts to inherit and protect intangible cultural heritage. Especially since the 18th National Congress of the Communist Party of China, the country has frequently emphasized "China's excellent traditional culture" and "cultural confidence" at multiple levels, further clarifying the importance of intangible cultural heritage to the country's future development. The important value and significance of "intangible cultural heritage", thus creating a widely cherished era context for the contemporary inheritance of "intangible cultural heritage". However, folk traditional handicrafts have their own self-consistent systems and laws, and colleges and universities are faced with the problem of how to integrate the modern education system with the inheritance of traditional handicrafts, such as how to adjust the balance between modernity tension and traditional confinement, how to coordinate Labor market issues of interest to all parties, etc.

Based on these complex issues, this article will take the inheritance of ancient building construction skills in southern Fujian as an example and explore the living inheritance path of traditional handicraft intangible cultural heritage items based on the modern apprenticeship system. Since ancient times, the Jiangnan area has been rich in products and developed in economy. At the intersection of the north and the south, Jiangsu has maintained an important position in the national arts and crafts since the Ming and Qing Dynasties. Suzhou's Kesi, Suzhou embroidery, and Ming-style furniture are among the most important handicrafts. legacy, often synonymous with high standards.

Yangzhou is located at the intersection of the Beijing-Hangzhou Canal and the Maritime Silk Road. Its unique geographical location has given it a pivotal economic position in history. Scholars gathered here and created brilliant achievements in arts and crafts and intangible cultural heritage. Inheritance of intangible cultural heritage through innovation has always been a practical problem. Combining intangible cultural heritage with popular science education and studying the living inheritance path and method of intangible cultural heritage in the development of cultural and creative products is the basic research to be carried out in this project one of the ideas. At present, our country has entered a brand-new information age. The introduction of intangible cultural heritage into the campus has allowed traditional culture to be popularized among college students, and has achieved phased results, but the continuous effect is insufficient.

Today, information technology and new media social platforms have brought changes to the study and lifestyle of urban college students. Static ones such as information posters, newspapers, graphic brochures, etc. have begun to be replaced by dynamic networks and live broadcast platforms, and traditional handicrafts have revived. The only way is to effectively enter contemporary society. The purpose of the United Nations to protect intangible cultural heritage is "the combination of intangible cultural heritage and social life". Intangible cultural heritage is a kind of skill that starts from the needs of people's life in different periods and cultures, and gradually changes from common to professional. Intangible cultural heritage handicrafts have a quiet cultural power, which has greater value in balancing the spiritual life of modern urbanites in modern society.

The teaching of handicrafts has been an important and mysterious topic since ancient times. Throughout the past and present, there are many stories about the learning and teaching of folk traditional handicrafts. These traditional stories all

reveal a widespread "bad habit" in traditional society, that is, handicrafts are "passed on to men but not to women" or "not passed on to people with foreign surnames". "Hang Embroidery" with a long history has a "rule" of passing males but not females. This rule severely restricts its contemporary development. Today, only 69-year-old Zhao Yijun is left as the inheritor. It is said that he began to learn the art of Hang Embroidery. At that time, his master was already 70 years old. The traditional apprenticeship system has two deficiencies. First, the modernization and transformation of the successor team is not enough.

2. THE PROPOSED METHODOLOGY

2.1 The basic idea and implementation path of living inheritance and innovation

The inheritors stay at the stage of traditional consciousness of "passing on the inside and not on the outside". The protection method of the family's art school is relatively conservative, and the concept of sharing skills cannot be accepted yet, and there are few exchanges and cooperation with the outside world, let alone cooperation with universities. On the other hand, some inheritors stick to the traditional handicraft beliefs, pay attention to the subjective experience of skills and product quality, and are more repulsive to the modernization of skills. Only by entering the lives of the people can the vitality of intangible cultural heritage be maintained. Many intangible cultural heritage items were created based on the needs of the people at that time. Intangible cultural heritage items such as Suzhou Ming-style furniture production techniques, Yixing purple sand pottery production techniques, and Nantong blue calico printing and dyeing techniques have changed with the times, but their core techniques have remained unchanged, while aesthetic levels and application scenarios have changed, so they are still in contemporary times. Can stay alive.

The application of blue calico in different themes of clothing, luggage, and jewelry design, the combination of synchronic research and diachronic research: the research should not only pay attention to the longitudinal historical research of "intangible cultural heritage" cultural documents, but also pay attention to the combination of modern design and traditional culture. The situation of the comparative study of the development of the paper, and the combination of the two studies, make the topic more in-depth and comprehensive. In the Bamboo Art Seminar held by the Ministry of Culture this year, 20 bamboo art non-heritage inheritors from all over the country received systematic professional training in art, design, and marketing in colleges and universities. More importantly, they tried to cross-border with designers. Cooperation, using bamboo as a medium, re-creation around traditional techniques such as "bamboo weaving, bamboo carving, and bamboo carving" in China's intangible cultural heritage. At the same time, focusing on the inheritance of bamboo art, we have been planning a series of "one bamboo, one world" intangible cultural heritage research activities since a year ago. The promotion of each type of culture and art needs to be disseminated.

There is an essential difference between the cultural communication of contemporary society and traditional society. Especially with the rapid development of information technology, contemporary communication has the characteristics of faster speed, wider audience, and higher efficiency. Therefore, making full use of contemporary diverse cultural communication media can promote better dissemination of folk traditional handicrafts. An important starting point of the modern apprenticeship system is the "double tutor" system. School teachers and enterprise masters jointly teach, and the teaching content is composed of "three modernized curriculum systems" (the third part will be described in detail below), and jointly improve the vocational learning system of students. In addition to IP development, the protection and inheritance of intangible cultural heritage should also explore more application space, carry out cross-border cooperation with other industries, and break through the existing development boundaries.

2.2 The innovative application and practical value of intangible cultural heritage in cultural and tourism integration products

In the past two years, the Ministry of Culture of China has vigorously promoted the training plan and inheritance and innovation of intangible cultural heritage groups. 57 art colleges and universities in China have joined the team, and the national intangible cultural heritage groups and intangible cultural heritage skills have received high attention and attention. At the same time, the "artisan spirit" is widely recognized and disseminated by the public. This cultural power comes from the cultural self-confidence when the economy of a big country rises. Many civil organizations, public welfare organizations, corporate brands, and design agencies have begun to join the team of intangible cultural heritage innovation. Craftsmen Individual creativity is highly stimulated. Local governments at all levels should pay attention to the contemporary inheritance of excellent traditional culture in the region. The government should not only provide policy and financial support, but also focus on broadening channels and fully disseminating it.

This dissemination generally includes relevant cultural exchange activities of government agencies, regeneration applications in urban environments, traditional handicraft competitions or seminars organized by the government, and project cooperation, etc. In addition, the important advantage of the modern apprenticeship system is to standardize the entry threshold of practitioners with the help of scientific and systematic talent training programs, high-level teaching quality monitoring processes and assessment mechanisms in colleges and universities. Compared with the traditional apprenticeship system, the scientific curriculum system not only grants apprentices skills, but also enhances apprentices' knowledge, craftsman spirit, and aesthetic taste, laying a foundation for knowledge reserves for the modernization of traditional skills. The door of the cabinet is in the form of a fan. The door is opened and closed by turning the folding fan. The synaesthesia response is triggered during the operation, creating a poetic sense of "still holding the pipa and half covering the face".

The black walnut panel and the folding fan are connected by metal parts, and the sight line can also be switched by turning the black walnut panel. First, it is necessary to take popular science education in colleges and universities as the research base, focus on the living inheritance strategy of intangible cultural heritage, and carry out research on the path of innovative products in combination with the deep integration of production and education between schools and enterprises. In the process of product development, rely on the foundation of popular science education and cultural research in universities, rely on high-quality school-enterprise resources and in-depth cooperation with cultural design companies and other platforms.

Secondly, for intangible cultural heritage projects involved in popular science bases in colleges and universities, it is necessary to focus on combining the integration advantages of the art creation team, including refining, and optimizing the characteristic process of traditional skills of intangible cultural heritage, and comprehensively improving the cultural accomplishment and aesthetic ability of intangible cultural heritage inheritors. Eighth century Chinese artists and designers in the 1990s were mostly lost in the Western aesthetic consciousness and value judgment system. The contemporary art system itself originated from the context of the western social context, and contemporary design also originated from the western art Nouveau and Bauhaus style systems. While China is rapidly entering the globalization system, the discourse power of contemporary Chinese culture and aesthetics has not yet been established. Fortunately, after the stage of economic construction and infrastructure construction, the government has made cultural construction an important goal of national construction in recent years.

3. CONCLUSION

Carrying out research on the living inheritance and innovation of intangible cultural heritage in the integration of cultural and tourism products is to endow the research results with the cultural communication characteristics of scientific education, which has the value of unifying the theory and practice of innovative research, and the wide application of its results is also, it will definitely drive regional and cross-regional cultural exchanges and emotional dissemination, provide a new platform and approach for more groups eager to understand intangible cultural heritage, and provide more comprehensive protection and support for serving the regional economy.

4. REFERENCES

[1] Lin Shangping. Live Inheritance of Intangible Cultural Heritage Items of Traditional Handicrafts Based on Modern Apprenticeship ——Taking the Inheritance of Traditional House Construction Skills in Southern Fujian as an Example [J]. Journal of Liming Vocational University, 2021(2): 7.

[2] Xiao Zhen, Xu Mengwei, Li Ling, Gu Li. Live Inheritance, and Innovative Development of Intangible Handicrafts in the Jiangnan Region of the Grand Canal Cultural Belt [J]. Light Textile Industry and Technology, 2020, 49(8): 4.DOI :CNKI:SUN:GXFZ.0.2020-08-056.

[3] Huang Huijia and Cheng Qianye. The Living Inheritance of Handicraft Intangible Cultural Heritage from the Perspective of Lingnan Culture--A Survey and Analysis Based on Guangzhou Costume Production Skills [J]. Chinese Place Names, 2019, 000(012):P.55-56.

[4] Tao Xuefeng, Xu Xiaoxiao. From "Intangible" to "Visible"——The Practice of Protecting and Inheriting Intangible Cultural Heritage in Hangzhou Handicraft Living Exhibition Hall[J]. International Museum, 2011(1):10.DOI: CNKI:SUN:GJBW.0.2011-01-010.

[5] Zhang Lili. Live Inheritance and Cultural Innovation of Intangible Cultural Heritage Handicrafts [J]. Shanghai Artist, 2016(5):4.DOI:CNKI:SUN:SHYS.0.2016-05-016.

[6] Zhao Lei. Discussion on the "Redesign" of Miao Nationality Intangible Heritage Handicraft Products Based on the Living Inheritance Model [J]. Guizhou Ethnic Studies, 2022, 43(5):7.

[7] Ding Xiong, Ning Jing. Research on the application of sustainable four-dimensional theory in the design of Lingnan's living inheritance service system [J]. Packaging Engineering, 2020, 41(14): 28-35.

[8] Wu Nan. Modern transformation of traditional handicrafts [J]. [2023-06-26].

[9] Lu Rui. Redesign of the tie-dyeing technique of the Bai nationality in Yunnan from the perspective of intangible cultural heritage [J]. Light Textile Industry and Technology, 2021, 050(009):P.54-56.

[10] Zhang Shunkai, Jiang Wenmiao. Contemporary Inheritance of Folk Traditional Handicrafts in the Context of "Intangible Cultural Heritage" [J]. Journal of Zhengzhou Institute of Light Industry (Social Science Edition), 2019.

[11] Zhao Danni. Research and Practice on Live Inheritance of Intangible Cultural Heritage Handicrafts under the Background of Cultural and Creative Industries [J]. Grand View: Tokyo Literature, 2019.

[12] Han Xuemei. Research on the Application of Traditional Chinese Handicrafts in Modern Design [J]. Shenzhen University, 2018.

[13] Liang Xulong. Let the intangible cultural heritage be inherited in a living state [J]. Hangzhou Daily [2023-06-26].

[14] Ye Tao, Institute of World Religions, Chinese Academy of Social Sciences. Handicrafts, Living Inheritance and Folk Beliefs [J]. 2009 International Forum on the Protection and Development of Traditional Handicrafts, 2012.

[15] Fang Lili. Fang Lili: On the Inheritance of "Intangible Cultural Heritage" and the Diverse Development of Contemporary Society——Taking the Revival of Traditional Handicrafts in Jingdezhen as an Example[C]//Chinese Society of Art Anthropology; Beijing Dance Academy; National Art Magazine. Chinese Society of Art Anthropology; Beijing Dance Academy; "National Art" magazine, 2014.

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Research on the Path of Digital Empowerment of Intangible Cultural Heritage Under the Background of Cultural Industry

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Abstract: In the context of the cultural industry, the empowerment of intangible cultural heritage by digital technology not only provides a new path for the protection, inheritance, dissemination, and innovation of my country's intangible cultural heritage, but also helps my country's cultural industry and economic development. From the perspectives of technology and economy, this article studies the influencing factors of the interactive coupling mechanism between digitization and cultural industries. The research on the impact of digitalization and living inheritance of cultural heritage, and the inheritance and protection of intangible cultural heritage items with the help of digital information media technology can effectively reduce the cost of inheritance and protection of intangible cultural heritage and solve the problem of insufficient inheritance of intangible cultural heritage items.

Keywords: digital empowerment, intangible cultural heritage, cultural industry

1. INTRODUCTION

The protection and inheritance of intangible cultural heritage should adapt to the development trend of society. In the era of digital information, the protection and inheritance of intangible cultural heritage should actively seek information channels and methods. The protection and inheritance of intangible cultural heritage based on the perspective of cultural industry needs to make full use of existing science and technology, and organically combine intangible cultural heritage with modern digital technology, so that intangible cultural heritage can be presented in a new look and form. In front of the public, we will continue to promote the sustainable development of the intangible cultural heritage industry.

Li Wei and others pointed out that from the perspective of digital empowerment, a new generation of digital technology is the basis of digital reform, and massive data resources have become new key production factors, forming new combinations, and systematically restructuring production methods. The revolution is changing the logic of value creation, the way of production management and resource allocation.

Chen Jiagui believes that new opportunities in the digital economy should be seized to stimulate a series of changes in corporate manufacturing models, business ecology, and ideological culture. Traditional craft intangible cultural heritage generally refers to the unique art form and skill system formed after long-term accumulation and inheritance based on ancient skills and traditional skills. It is a traditional craft skill with a long history and unique cultural connotation. It can not only reflect the unique regional characteristics and traditional cultural heritage, but also add new vitality to traditional handicrafts and stimulate regional economic growth through the integration and development of cultural products. For example, Jingdezhen's ceramic techniques, Nanjing's brocade weaving techniques, Suzhou's Ming-style furniture techniques, Anshun's batik techniques, and Guizhou's Moutai brewing techniques are all familiar handicraft production techniques.

The data collection standards for intangible cultural heritage resources are not uniform, which affects the operational efficiency of digital intangible cultural heritage projects and fails to promote the rapid development of the intangible cultural heritage digital industry. And this also involves the intangible heritage itself, which has its own uniqueness and the difficulty of collecting it. Therefore, it is necessary to study the technical standards related to resource construction in line with the characteristics of my country's intangible cultural heritage. Digitization and cultural industries are both Recently, the society has paid more attention to the issue, and the relationship between the two is getting closer. The coupling between digitalization and cultural industry is mainly reflected in two aspects. On the one hand, digitalization provides content guarantee, technical support, communication platform and development space for the development of cultural industry.

On the other hand, the development of the cultural industry will reversely generate demand for more advanced technologies, thus promoting the development of digital technologies. In addition, the development of the cultural industry can also increase people's attention and sense of identity to intangible cultural heritage and provide impetus for the living inheritance and protection of intangible cultural heritage. One of the main development trends of digital technology in the future is virtual reality technology. By applying virtual reality technology to protect and inherit intangible cultural heritage, the digital influence of intangible cultural heritage can be effectively improved. In addition to developing the industrialization channels of intangible cultural heritage items, it is also possible to develop the intangible cultural heritage itself, such as fully exploiting the commercial value of folk festivals, folk stories, folk art performances, etc., and virtual reality technology is

undoubtedly the key to realizing the best platform for the industrialization of ethnic folk customs, oral literature, and performances of intangible cultural heritage.

2. THE PROPOSED METHODOLOGY

2.1 Digital protection and inheritance of intangible cultural heritage from the perspective of cultural industry

With the progress of the times, science and technology are constantly developing, and people's aesthetic concepts are also constantly changing. Innovation in inheritance has become a necessary condition for the development of intangible cultural heritage. The craftsmen in the past had a low level of education, so they could only pass on the skills of the older generation through oral instruction. Limited productivity is the main factor restricting the industrialization development of some intangible cultural heritage items. Taking ou embroidery as an example, the production development of ou embroidery not only encountered the problem of no successors, but also the lack of labor force. The production of craft intangible cultural heritage products must be completed by hand by craftsmen, and there are many production steps, which require a lot of labor and production time.

Moreover, the same craftsman can only produce the same product at the same time, and due to the variety of craft products, it is difficult to form a large-scale production process like "copy and paste", which undoubtedly leads to the production of traditional intangible cultural heritage products, which consumes a lot of time and money. The duration and energy consumption are high, and the cost rises accordingly. Websites have become a common form of dissemination of intangible cultural heritage items. At present, intangible cultural heritage centers at all levels in my country have generally established intangible cultural heritage websites, but the industrial operation function of intangible cultural heritage websites is not outstanding and needs to be carried out around the development needs of the intangible cultural heritage industry.

First, use the intangible cultural heritage website to establish a sales center for intangible cultural heritage products, strengthen personalized services for intangible cultural heritage consumer groups, effectively combine intangible cultural heritage handicraft products with private customization, and focus on establishing intangible cultural heritage product development through the intangible cultural heritage website the carrier of sales. In the process of integration of digitalization and intangible cultural heritage, due to insufficient funds for the living inheritance of intangible cultural heritage, some supporting infrastructure construction is not perfect, such as insufficient construction of intangible cultural heritage digital platform, insufficient construction of cultural experience scenarios, etc. Economic problems also affect the development and application of technology, and in less developed and rural areas, the development of relevant digital theories and technologies is incomplete or interrupted. In the era of mobile Internet, mobile APP software has become an important way and channel for people to transmit information. Through the development of intangible cultural heritage mobile APP software, it can effectively realize the digital protection and inheritance of intangible cultural heritage and meet the needs of intangible cultural heritage in the information age. development needs.

At present, many mobile APP software displaying intangible cultural heritage have been developed, which will help promote the continuous development of the intangible cultural heritage industry in the direction of scale. In the era of intelligence, data empowerment and utility will accelerate digital transformation. Analyzing the enabling mechanism will further promote the digital reform, realize the optimal allocation and structural adjustment of various resources, and promote the linkage and empowerment effect. At present, the research on the mechanism of digital empowerment is not rich. Existing research mainly focuses on issues such as digital empowerment government governance, digital economy, digital society, and digital rule of law.

2.2 Intangible cultural heritage digital empowerment path from the perspective of cultural industry

Existing research mainly believes that the mechanism of data empowerment can be explored from the aspects of communication and interaction concepts, data sharing, service optimization, and scientific decision-making; it can also focus on the occurrence of the empowerment process and the evolution of the empowerment method and found that the service-oriented digital platform. The logical route of the empowerment method and its dynamic evolution law. Traditional handicraft products retain more traditional culture, but are less integrated into modern culture, so they lack the core competitiveness to attract consumers. The lack of creativity in products will directly lead to low market share, poor competitiveness, and inability to meet consumer needs, thereby affecting the development and profitability of the industry. For example, traditional bamboo products without creative injection are often made into packaging boxes, which lack both consumer appeal and product added value, resulting in small product profit margins.

Increase government guidance. Strengthening government guidance is an important carrier to realize the cultural and economic value of intangible cultural heritage items. Only by relying on the government to serve the digital protection and inheritance of intangible cultural heritage items can the cost of intangible cultural heritage digitalization be effectively reduced, and the industry integration and development of intangible cultural heritage items be promoted. Digital restoration and reproduction technology can be based on data research, coupled with the use of advanced technology to restore, and reproduce the cultural scenes, production techniques, cultural space and other information of intangible cultural heritage that are missing in the inheritance process, providing a basis for the re-creation and development of the cultural industry. Further development provides complete and visual data information. Part of the intangible cultural heritage uses visualized digital animation technology to restore and reproduce the content, scenes, and scenes of intangible cultural heritage, so that people can have a more comprehensive and objective understanding of intangible cultural heritage culture, reduce stereotypes of intangible cultural heritage, and improve the understanding of intangible cultural heritage. Awareness and identity make the audience of the cultural industry more extensive.

Apps such as wisdom intangible cultural heritage and intangible cultural heritage Sichuan have become important channels for online promotion of intangible cultural heritage. Using Internet technology and cloud computing technology, many intangible cultural heritage resources can be gathered, and under the function of intangible cultural heritage APP, the

fragmented time of potential intangible cultural heritage consumer groups can be integrated, to meet the needs of consumers, and to improve consumers guide and promote intangible cultural heritage consumption. The rapid development of digital technology has provided new channels and methods for the protection and revitalization of intangible cultural heritage skills. To revitalize traditional crafts, it is necessary to carry out the promotion of digital empowerment industries based on respecting excellent traditional culture, respecting regional cultural characteristics, respecting national traditions, and protecting cultural diversity.

The protection of intangible cultural heritage can not only bring about the inheritance of traditional culture, but also bring about the rapid revitalization of the economy, which is a "win-win" choice. However, if we only focus on revitalization, only pursue economic interests, and ignore spiritual pursuits, and ignore those cultural, social, and spiritual interests that truly represent the happiness of residents' lives and the interests of multi-faceted sustainable development, then the social benefits brought by this model progress will become more and more monotonous due to the lack of comprehensiveness and coordinated development.

Strengthen research and development investment in relevant digital technologies to meet the needs of digital protection and inheritance of intangible cultural heritage, and comprehensively improve the level of digital research and development. First, it is necessary to demonstrate and extract the core elements of its cultural genes by scientific means and develop advanced retrieval methods for intangible cultural heritage data and information. Secondly, develop a suitable database, effectively construct the digital database of intangible cultural heritage, and meet the needs of widely disseminating intangible cultural heritage items through the construction of intangible cultural heritage database and intangible cultural heritage data information sharing technology.

3. CONCLUSION

All in all, the digital protection and inheritance of intangible cultural heritage based on the perspective of cultural industry should make full use of existing digital technology, strengthen technology development, promote the healthy operation of intangible cultural heritage through different channels, and drive the consumption of intangible cultural heritage. And pay attention to the protection of intangible cultural heritage intellectual property rights. Only when the design of intangible cultural heritage products keeps pace with the times under the background of the digital age, reflects the characteristics of the times, and conforms to the current public aesthetics, can it have a broader market. Use digital multimedia technology to record and publicize intangible cultural heritage, let intangible cultural heritage enter communities, schools, factories, and the international market, which is conducive to promoting the revitalization of traditional handicraft intangible cultural heritage industries.

4. REFERENCES

[1] Chen Lingyun. The Mechanism and Path of the Revitalization of the Intangible Cultural Heritage Cultural Industry of Digital Empowerment Technology ——Taking Wenzhou as an Example [J]. Journal of Wenzhou Vocational and Technical College, 2021, 21(3):6-10.

[2] Tao Ran. Digital Transformation and Marketing Strategy of Intangible Cultural Heritage Products in the Metaverse Era [J]. Journal of Liaocheng University: Social Science Edition, 2023(2):7.

[3] Liang Yun, Liu Dongtao. Cultural Bonding, Technological Innovation and Design Performance: An Exploration of the Innovation Path of Zhuang and Dong Nationality Cultural and Creative Products under the Background of "One Belt and One Road" [J]. Cultural Industry Research, 2021(1):10.

[4] Sun Liqing. The Current Situation and Reflection on Media Presentation of Representative Inheritors of Intangible Cultural Heritage of Ethnic Minorities in the Context of New Media——Based on the Investigation of Xiangxi in Hunan and Qiandongnan in Guizhou[J]. Journal of Guangxi Normal University for Nationalities, 2022, 39(3): 19-24.

[5] Fan Chuanguo, Sun Ziping. The dissemination of traditional handicraft intangible cultural heritage under the empowerment of artificial intelligence [J]. Media Observation, 2021.

[6] Zhan Qi. Intangible Heritage Metaverse: Empowerment, Integration, Immersion [J]. Today, Media, 2022, 30(9): 101-103.

[7] Liu Mengyao, Li Yiyao, Xian Yudi, et al. Coupling mechanism analysis and countermeasures of digital empowerment of intangible cultural heritage living inheritance under the background of cultural industry [J]. China Collective Economy, 2023(11): 4.

[8] Gong Lina, Yang Chongmei. Research on the Protection and Inheritance of Intangible Cultural Heritage Based on Targeted Poverty Alleviation under the Digital Background [J].[2023-06-26].

[9] Tu Shaorong and Huang Yi. The innovative way of applying Xingan papercut to packaging design [J]. Paper Information, 2021, 000(007): 85-86.

[10] Luo Ting, Luo Ting. Research on the protection status and cloud inheritance mechanism of ethnic minority national non-genetic inheritors in my country[J].[2023-06-26].

[11] Li Duoduo. Research on Live Recording and Dissemination of Intangible Cultural Heritage under the Digital Work Mode——Taking Jinling Sutra Carving Office as an Example [C]//Shanghai and Yangtze River Delta Design Graduate Academic Forum. 2012.

[12] Li Duoduo. Research on Live Recording and Dissemination of Intangible Cultural Heritage under Digital Work Mode [D]. Nanjing University of the Arts, 2013.

[13] Zhu Yeqing, Wang Yunqing. Problems and Prospects of the Protection of Intangible Cultural Heritage from the Perspective of Digital Inheritance [J]. Humanities World, 2019(17).DOI:CNKI:SUN:RWTX.0.2019-17-010.

[14] Zhou Xiaoqin. The Dilemma and Realistic Path of China's Intangible Cultural Heritage Digital Inheritance——Based on the Perspective of New Institutional Economics [J]. Journal of Jinzhong University [2023-06-26].

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Cultural Communication-Oriented Construction of Innovative Teaching Model for English Majors

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Abstract: English grammar is a compulsory course for English majors in colleges and universities. English grammar is an independent basic subject and a branch of linguistics. It is the organizational law of language and gives language a structural system. The learning of grammar must be organically combined with the use of language. The aim is to explore how to construct a culture-transfer-oriented grammar teaching model for English majors, in order to explore new ideas for English major grammar teaching, build a new teaching system for English basic education, run through the new content of humanistic quality education, and use information technology to improve English teaching methods, and carry out the second classroom activities that reflect the characteristics of professional humanities. Integrate vocational humanistic quality education into the teaching mode of higher vocational English classrooms to comprehensively improve students' comprehensive quality.

Keywords: Cultural Communication; Innovative Teaching; English Majors

1. INTRODUCTION

Grammar is the structural law of language, which provides people with the rules of word inflection and the formation of words into sentences. It is the result and symbol of the abstraction of human thinking and has a certain nationality and stability. Learning grammar is a means, not an end. Although grammar has a certain degree of independence, it endows language with a structural system and is a tool for language communication. Cultivating students' pragmatic ability is the goal of foreign language teaching. Pragmatic ability refers to the ability to use language effectively to achieve a certain purpose and the ability to understand how to use language in specific situations. Therefore, English teaching should truly play the ideological and political role of humanities courses and be subtle in the process of English teaching integrate into ideological and political education, pay attention to the education of students' moral education and the cultivation of professional humanistic quality.

English teachers should continuously improve their moral education awareness and ability, grasp the target orientation of English course ideological and political and humanistic quality education, integrate ideological and political work into the whole teaching process, and realize all-round education. Cultivating students' ability to learn and use English comprehensively has become a common concern and research topic of English teachers, experts, and scholars. This book re-examines the college English teaching mode and teaching method from the perspective of ecology. The author uses ecological principles and methods to analyze various problems in college English teaching and explains the causes of these problems. Ways to solve the problem are discussed. The book is divided into the connotation and characteristics of the ecological model of English teaching, theoretical basis, ecological research, investigation of imbalance phenomena, operating procedures, support systems, optimization of the current situation, etc., and systematically studies how to construct an ecologically balanced college English teaching system.

The relationship between intercultural communication and college English teaching. From the analysis of the elements of intercultural communication, language is an element of intercultural communication, and there is a close relationship between language and culture. Therefore, with language as a link, an important relationship between college English teaching and intercultural communication has been established. relation. Language is the reflection of culture, and culture is the carrier of language. Language and culture are realized through communication, and language can also be regarded as a kind of communication.

Under the background of different languages and cultures, the phenomenon of cross-cultural communication must exist. Therefore, the importance of college English teaching for intercultural communication is self-evident. For Chinese university education, English is a second language, and the goal of college English teaching is to cultivate students' intercultural communicative competence. Therefore, college English teaching has great potential for cultural teaching and intercultural communicative competence training. Communication and display are also two levels of a link. Students have gained some understanding of new knowledge through self-study and questioning. If you can give students time to communicate, then unfamiliar knowledge will become familiar. English as a language is used to communicate and express ideas.

2. THE PROPOSED METHODOLOGY

2.1 Analysis of College English Teaching Mode from the Perspective of Cultural Communication

To learn English, you should first learn it as a tool of communication. Therefore, communication is particularly important in English class. Secondly, another level of communication display is display. Cultivating a student is not only to give him knowledge, but also to give him the ability to use knowledge. There are also many teachers who think that grammar courses involve many knowledge points, scattered, complicated, and boring, and are not as easy to arouse students' interest as other courses. Teachers pay more attention to grammatical rules rather than words, context, and communicative purposes. Teaching stays at the sentence level

instead of discourse level and cannot play the intermediary role of grammar. This results in teachers teaching grammar because of grammar, and students teaching grammar for exams. The situation of learning grammar.

More and more teachers and students have fully realized the importance of grammar learning, but due to the lack of effective learning strategies and teaching methods, the result is often half the result with half the effort and full of loopholes. These undoubtedly show that grammar teaching needs a certain teaching strategy, that is, using certain teaching practices and principles to rebuild a new model of grammar teaching for English majors. Textbooks are the carrier of language teaching. Teachers should dig deep into the content of the textbooks and use them properly. From the points to the surface, compare the differences between Chinese and western cultures, discard the dross and extract the essence, learn from the excellent western culture, promote Chinese traditional culture, and create a strong educational atmosphere. For example, we focus on the humanistic quality education of students in the teaching of basic English, help students understand the differences between Chinese and Western cultures, and conduct moral, psychological, aesthetic, and other education to improve students' cultural accomplishment; the professional English part highlights professional humanities The characteristics of combining quality and profession cultivate students' noble professional ethics and professional concepts.

How to reform the teaching mode of college English from the perspective of cross-cultural communication and communication is an important problem faced by college English teachers. Change the status quo of traditional teaching that only pays attention to the teaching of basic knowledge and ignores the cultural connotation of English and the differences in cultural exchanges between the East and the West, change the Chinese way of thinking in traditional English teaching and learning, and closely combine western culture teaching with English listening, speaking, reading, and writing. First, introduce the cultural common sense needed for communication in college English teaching. Mastering the basic knowledge of the differences between Chinese and Western cultures is the basis for cultivating college students' cross-cultural communication skills. For example, Orientals speak in a subtle and subtle way, while Westerners like to be straightforward. Easterners shake hands when they meet, while Westerners are used to hugging; The difference can be understood through the teacher's classroom lectures. Secondly, play original soundtrack movies in the multimedia classroom, watch them with the help of superior resources such as Western American dramas and British dramas, and understand and master the cultural differences between the East and the West, such as the way westerners speak on different occasions, the names of people, the way of hospitality and etiquette. Teaching objectives and principles. In my country's college English teaching, combined with the current society's requirements for English talents, the teaching objectives include three levels, namely language ability, communicative ability, and cross-cultural communication ability.

2.2 The Construction of the Model of English Culture Communication in Higher Vocational Education

Language ability refers to improving students' pronunciation, grammar, and vocabulary listening, speaking, reading, writing, and translating abilities through teaching, communicative ability refers to students' ability to use English reasonably for basic communication on appropriate occasions; cross-cultural communication ability. It refers to the ability of students to flexibly use English knowledge and skills to communicate according to different cultural environments and contexts. In the context of cross-cultural communication, college English teaching should follow certain teaching principles: one is to be student-centered, to cultivate learners' ability to learn independently. English positivity. The problem that students most need to solve in English teaching, the thing that needs to be mastered most in this class, and the thing that is most difficult to master is "fine".

These things must not only be explained, but also thoroughly explained. Once explained thoroughly, they must be consolidated through practice. This is to use practice to promote teaching, and to use practice to promote learning. English teachers should pay attention to intensive lectures in the classroom: the timing of intensive lectures should be timely, the degree must be grasped, and the position should not be offside; Students have room to think and digest. For difficult-to-understand problems, step-by-step thinking questions should be designed to induce students to gradually complete their learning goals. Teaching should be carried out according to the internal logic of knowledge and the cognitive level of students, and a systematic teaching system should be constructed. Most students with grammar knowledge have learned it in high school, and repeated explanations will not only waste time, but also make students lose interest. What teachers should do is to deepen and improve the grammatical knowledge points, summarize the knowledge points to a high degree, and activate the relevant knowledge accumulated in the learners' minds to enter a deeper level of learning.

In teaching activities, teachers should design operable tasks around specific language items, and students can complete the tasks through communication, explanation, inquiry, and other forms. Teachers should not only fully understand the relevant knowledge of oral English courses, but also need to grasp students' thinking trends in real time, understand students' difficulties, and provide timely feedback and correct guidance. Therefore, the PBL teaching mode puts forward higher requirements on the professional knowledge ability of teachers and the ability to control students' problems. Simulate real-life scenarios through group dialogue. Cross-cultural English teaching should be carried out from two aspects of theory and practice, with special emphasis on scene simulation training, allowing students to play different roles to conduct situational dialogues, and cultivate students' comprehensive English application ability in actual communication.

The research on college English teaching mode from the perspective of cross-cultural communication needs to analyze the college English teaching mode, teaching objectives, teaching content, teaching characteristics, teaching principles, teaching methods, teaching evaluation and teaching nature from the cross-cultural perspective. Establish an interactive teaching mode of reading and writing, guide students to read many western original works, write out their impressions after reading, or simulate novels with wonderful passages to write novels, to promote reading through writing and improve their writing level through reading. From the perspective of the teaching objectives of college English, the teaching content should include three aspects, namely English language teaching, English culture teaching and intercultural communicative competence teaching.

Throughout the university stage, English language teaching is a basic part, mainly including the basic knowledge and use of English, such as words, pronunciation, grammar, sentence patterns, etc., cultural teaching is an important content throughout college English teaching, including cultural knowledge and communication , such as the development of English culture, general laws, the composition of English culture, etc., the teaching content of intercultural communication ability should be combined with the culture of the mother tongue, to teach students the cultural content contained in the language itself, and guide students to communicate proficiently in the context of English culture. Classify, integrate, and optimize teaching resources from the perspective of professional construction, excavate the content of teaching materials, and reflect moral education and the cultivation of professional humanistic qualities. Highlight the personalization and differentiation of teaching design according to class situation and student level, take students as the center, pay attention to the individual differences of students, tap the potential of students, and teach students in accordance with their aptitude.

3. CONCLUSION

To adapt to the pace of development of English majors, it is imperative to reform the classroom teaching methods of professional English grammar in colleges and universities. The goal of grammar teaching is not to master the theoretical knowledge of grammar, but to train students to use the knowledge they have learned flexibly, effectively and creatively, to solve practical language phenomena, to realize real communication, and to promote the improvement of pragmatic ability. Mastering grammatical knowledge is only a staged goal and means, and we should focus on the high-level goal "pragmatic ability". From the perspective of cross-cultural communication, in college English teaching, teachers should change the traditional evaluation methods, pay attention to the development of students' comprehensive abilities and students' individuality, and adopt the evaluation mode combining "authentic evaluation" and "performance evaluation". Observation of the learning process, making a comprehensive evaluation of its effort, progress, learning attitude and final achievement.

4. REFERENCES

[1] Wang Wei. The new question type of college English four-level translation and the construction of cross-cultural translation teaching model [J]. Education and Teaching Forum, 2015(1):2.

[2] Zhu Lianping. Research on the reform of the characteristic teaching mode of "Course Ideology and Politics" for English majors——Taking the "Ceramic Culture Translation and Communication" MOOC course as an example [J]. Journal of Jingdezhen University, 2019, 34(4):4 .

[3] Liu Xiaoxing, Liu Xiaomeng. The Construction and Practice of SPOC Flipped Classroom Teaching Mode of College English under the Output Orientation [J]. Journal of Zhaotong Teachers College, 2019, 041(005):94-98,114.

[4] Qi Wei. Exploration on the local characteristic teaching mode of English teaching for tourism majors in secondary vocational schools [J]. New Education Era Electronic Magazine (Teacher Edition), 2018.

[5] Duan Fangfang. The Model Construction of Tea Art English Cross-cultural Teaching [J]. Fujian Tea, 2017(8):2.

[6] Su Weimin. New Thoughts on Intercultural Communication Teaching of College English Courses under the Background of "The Belt and Road Initiative"——Taking "self-centered, all-inclusive" as the perspective [J]. Modern English, 2022(15): 4.

[7] Zhao Qian, Zhang Jing. Talking about how to build a student-centered and teacher-led cultural teaching model for English majors [J]. Chinese Outside School Education, 2011(18):107-108.

[8] Xi Wei. Innovative Strategies for Cultivating Cultural Confidence in Senior English Teaching [J]. Anhui Educational Research, 2022(26):6-8.

[9] Ding Runxin. Constructing a College English Teaching Model Based on Cross-Cultural Communication—— Comment on "Exploration of College English Education from a Cross-Cultural Perspective" [J]. Chinese Journal of Education, 2016(6): 1.

[10] Li Deyu. Research on the Innovation of Tourism English Teaching Model Based on Intercultural Communication Ability Orientation [J]. 2020.

[11] Zhang Li. Research on teaching beliefs of primary school English teachers from the perspective of social cognition [D]. Nanjing Normal University, 2017.

[12] Lu Jiong. Analysis of College English Teaching Mode from the Perspective of Intercultural Communication [D]. University of Science and Technology of China, 2015.

[13] Miao Weijia. The Application of Culture-Oriented Teaching Mode in College English Intensive Reading Courses--From "New College English" [J]. Journal of Taizhou University: Social Science Edition, 2003.

[14] Shi Mei, Bi Yunhui. Research on the reform of the teaching mode of "Course Ideology and Politics" for English majors——Taking the course "Culture and Translation" as an example.

[15] Du Minghui. Research on the penetration of Chinese culture in foreign teaching in Chinese medicine colleges and universities from the perspective of post-methodology——Taking Nanjing University of Traditional Chinese Medicine as an example [J]. Journal of Jiangxi Institute of Education, 2021, 042(002):76 - 79,118.

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The Remote Transmission and Analysis Framework of Physical Guiding Data Based on Information Technology

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Abstract:Aiming at the problem that traditional physical education activities need to occupy a large space and more human resources, the paper analyzes and designs a remote physical education data transmission and analysis platform based on WEB server and information technology, SQL as the database. The platform combines RTP (Real-time Transmission Protocol) and RT-CP (Real-time Control Protocol) to realize the optimization of multimedia data transmission. The final test proves that the performance of the system is stable, which not only breaks the traditional teaching method, but also provides a new learning mode for students. In addition, teaching resources have been optimized, and teaching efficiency has been increased by 5.3%.

Keywords: Remote Transmission, Physical Guiding, Guiding Data, Information Technology

1. INTRODUCTION

Quality education continues to deepen, and the country pays more and more attention to the reform of basic education and the construction of core literacy. The redesign and development of the curriculum focuses on cultivating students' core literacy, improving students' comprehensive literacy, and promoting national progress. The new round of revision of senior high school curriculum standards regards moral cultivation as the starting point and end point of the revision of curriculum standards [1-6].

highlights the guiding role of developing students' core literacy in curriculum construction. The "New Curriculum Standards" clearly states that in the course of classroom implementation, high school physics courses should promote students' autonomous learning, and allow students to actively participate, be willing to explore, have the courage to practice, and be diligent in thinking. Through a variety of teaching methods, it helps students learn physical knowledge and skills, cultivate their scientific inquiry ability, and gradually form a scientific attitude and scientific spirit [1]. Physics is a basic natural science. Core literacy is a necessary common literacy that applies to all groups of people and disciplines. [7-14].

Using the teaching management information system, daily work is carried out on the Internet according to predetermined procedures, so that the work process is more standardized and transparent, the inquiry and feedback of various information is more convenient, and the teaching management is effectively open, informatized and holiday-free. In the subject of information technology, the connotation of core literacy is mainly reflected in the following aspects: First, core literacy cultivates students' information awareness. Correspondingly, as an important level of curriculum implementation and an important carrier for the implementation of curriculum standards, teaching materials can be understood as teaching materials based on core literacy. Then, what should an information technology teaching material based on core literacy look like and how should it be designed. The cultivation of innovation, inquiry, cooperation and other abilities requires that the teaching mode must be transformed from the teacher's "full house" and "cramming" into a learning mode of students' independent inquiry, independent learning, and cooperation to complete tasks. The interactive teaching mode of guided learning is based on "foreign thinking mode", "study case guidance", "three doubts and three explorations. 3. The construction of information technology textbook structure design is in the construction of the basic framework of information technology textbook structure design, whether it is " Curriculum Standards" or others, all position the discipline goal on the cultivation of core literacy, when the framework is constructed. The new curriculum takes core literacy as the framework for the goal of educating people. Whether it is the "About Comprehensively Deepening Curriculum Reform and Implementing Moral Tree" issued by the Ministry of Education Post-95s students are trendy in thinking, like flexible teaching methods and a lively classroom atmosphere, and reject the immutable traditional "cramming". The characteristics of high school physics are abstract and difficult to understand. To generate interest in high school physics and maintain the interest in physics and actively participate in physics learning requires teachers to change their thinking and change the existing traditional teaching concepts. The CTACK framework should be effectively recognized first, because the framework It reflects the interdependence of computational thinking, activities, and subject knowledge, and is the basis for the design of textbook structure. In the core literacy of information technology, developing core literacy and enhancing the educational value of textbooks has become the essential pursuit of new textbooks. The functional orientation of "materials" will inevitably make the teaching materials change from the traditional "knowledge" as the main and the "activity" as the supplement, to the "activity" as the main and the "knowledge" as the supplement. [15-21].

The integration of information technology and physics curriculum can stimulate students' interest in learning physics and give full play to it. The role of students as the main body of learning improves the efficiency of classroom teaching, cultivates sustainable development talents that meet the needs of the times, and meets the needs of the society. [22-24]

2. THE PROPOSED METHODOLOGY

2.1 The Physical Education with Data Analysis

If you want to design the structure of information technology textbooks based on core literacy, you can directly use the CTACK structure framework as the Mainly, actively understand the logical clues of students' thinking

development, and design and design the content of teaching materials from macro, meso, and micro perspectives. Different understandings of the structure of teaching materials will inevitably affect the quality of subsequent teaching materials design, as well as front-line teachers and students' grasp of courses and teaching materials. The above phenomenon cannot be overcome in the traditional physical education teaching model. Everyone knows that there are a lot of flying, high-speed, and flipping technical movements in physical education textbooks. Simply put, the integration of information technology and curriculum is to integrate all available hardware and software related to information technology. of the actions. The teacher's slow speed affects the completeness and effect of the action. At this time, teachers can only demonstrate repeatedly and explain repeatedly. The final result is that the teaching process is affected. Moreover, too many explanations and demonstrations can easily make students misunderstand. Zen is also a difficult problem in the traditional physical education teaching model. The traditional teaching method one-sidedly emphasizes the teaching role of teachers, and only pays attention to the problem of how teachers teach, and ignores the dominant position of students. Purely competitive sports technology teaching is the main teaching method. Teachers only use a single explanation, demonstration, and students imitate exercises. Overemphasize The practice method is neat and uniform, ignoring the existence of individual differences among students, so that students are in passive practice. As a result, "I only don't understand, I only practice,' and I ignore students' emotions and experience, which ultimately leads to a situation where students like sports but not sports classes. The sports network teaching platform can support the development of sports courses through the network platform. Teaching: Full use of the campus network makes it possible to combine network technology and teaching.

Teachers can achieve their teaching goals through the guidance and practice of the network platform. Students can connect to the sports network teaching platform through the campus network to realize teaching interaction.

2.2 The Application of Information Technology in Physical Education

In the process of teachers' teaching and students' learning, the knowledge, phenomena and other contents based on information technology are effectively and reasonably integrated, and it is expected to achieve the optimization of the teaching and learning process and effect server, and then connect the server to a local area network that can be accessed by users.

When From a mesoscopic point of view, we should actively understand the internal activity logic and subject knowledge logic of textbook content, and pay attention to the diversified forms of textbook content organization under the logic. From a microscopic perspective, structural design can be specific to the curriculum. In the field of curriculum and teaching theory, there are many different understandings of the structure of teaching materials, which can be roughly summarized into the following four types of views: the view of elements and components, that is, the structure of teaching materials is regarded as an organizational form that conforms to the rules among the various elements and components within the teaching material. The server middleware used by the distance learning system is Tomcat 6.0. The database server adopts the Windows server 2008 operating system, and the hardware configuration is 8-core CPU, 16G memory, and 250G hard disk space. The database uses My SQL. In the testing process of this module, it mainly tests the students' course selection function, score management and query function in the sports network teaching platform. The test case is the result of a student's selection of sports courses such as football, basketball, swimming, Tai Chi, and table tennis, as well as the student's performance data in each course. After testing, the system can effectively detect whether the credits, grades, etc. of the course selected by the student are out of bounds, and whether the input of the student or teacher user is reasonable.

2.3 The Remote Tradition and Analysis of Sports Data

The information technology studied in this paper refers to the digital information technology related to education based on computer multimedia and network. The information technology environment in this study refers to the information technology environment that is currently widely used in primary and secondary schools.

For the application of CTACK in course teaching activities, teachers should design higher-meaning acceptance, experiential and other micro-organizational structures according to its content characteristics and activity requirements. The above several types of viewpoints have their own rationality, or from the composition of elements, or from the form of presentation, or from the degree of appearance, or from the perspective of the system level, expounding the understanding of the structure of the textbook. But in general, the understanding of the structure of textbooks is purely from a certain perspective. The guided interactive teaching mode is a teaching mode that adapts to the needs of the times and implements the requirements of deepening the new curriculum reform. It is based on the learning theory of cognitivism and constructivism. This teaching mode is different from the traditional teaching mode, in that teachers are changing their teaching ideas and implementing quality education. The design of information technology teaching materials based on core literacy, its function is not only to impart knowledge, the rapid development of information technology. its interaction and integration with various fields of society, the amount of data soars. Combining the above viewpoints, this study starts from the viewpoint of structuralism, and integrates the elements view and system level view of the structure of textbooks to form a further understanding of the structure of textbooks: the structure of textbooks is a three-dimensional structure with two meanings. The interactive teaching mode of guided learning is a teaching mode with teachers as the leading role.

students as the main body, combination of guided learning and interactive teaching. It is derived from the "heuristic" teaching mode, which combines the characteristics of the "heuristic" teaching mode and the "inquiry-based" teaching mode, emphasizing students' autonomous learning under the guidance of teachers, and focusing on the cultivation of students' learning ability. The application of data management and analysis module is becoming more and more obvious, and the data management and analysis module can improve students' core literacy, improve students' data management and analysis ability, and make more effective use of data ability to promote social development. The elements of teaching materials mainly include knowledge, skills, ability elements and necessary non-cognitive elements such as emotional attitudes, ethics and morality.

3. CONCLUSIONS

The role of teachers has changed from authoritative knowledge instillers to classroom participants who are equal

to students. Teachers' work is no longer simply the transmission of knowledge, but has become a facilitator, organizer and guide of students' learning. Guide to promote learning, combine learning and thinking, and guide learning to interact", so that students become the main body of the classroom.

4. REFERENCES

[1] Tang Qing. Analysis based on the combination of modern information technology and junior high school physical education [J]. Wen Yuan (High School Edition), 2019, 000(003):481.

[2] Yang Gaihong, Zhao Dong, Deng Hao, et al. Development and design of a web-based remote physical education platform[J]. Electronic Design Engineering, 2018, 026(022): 10-13, 18.

[3] Yang Gaihong, Zhao Dong, Deng Hao, et al. Development and design of a web-based remote physical education platform[J]. Electronic Design Engineering, 2018, 26(22):16-19+24.

[4] Wang Nan. Research on junior middle school physical education based on information technology[J]. Mingri, 2018(37):146-146.

[5] Li Xuefeng. Educational technology based on information technology in junior high school physical education teaching thinking[J]. New Curriculum (Middle School), 2019(9).

[6] Wang Ke, Zhang Xingyu, Duan Weijun, et al. Research on Innovative Physical Education Teaching Model in Colleges and Universities Based on Network Information Technology [J]. Education Teaching Forum, 2019, 000(051): 165-168.

[7] Zhang Xia. Research on the Application Status and Development Countermeasures of Information Technology in Physical Education——A Case Study of Primary School Physical Education in Songjiang District, Shanghai [J]. Leisure, 2019, 000(007): P.162-162.

[8] Zhou Yumei. Analysis of the role of information technology in physical education[J]. Questions and Research, 2020(30).

[9] Zeng Fanrong. Research on the Application of Information Technology in the Teaching of Physical Education Courses in Colleges and Universities [J]. Sports Fashion, 2019.

[10] Xu Yang, Li Haijie. Analysis on the application of information technology in physical education [J]. Chi Zi, 2019, 000(017): 213.

[11] Yuan Zhiliang, Yuan Zhe. Research on the application of information technology in the teaching of physical education in colleges and universities [C]// The compilation of the results of the 2019 Teaching Research and Teaching Writing Innovation Forum (1). 2019.

[12] Hu Yong. An information technology teaching system based on big data:, CN108509606A[P]. 2018.

[13] Wang Huaiyu, Tao Pei. Logistics information integrated mobile training device based on electronic information technology:, CN210295494U[P]. 2020.

[14] Zhou Jiangang. Research on physical training and teaching based on modern information technology [J]. Friends of Humanities, 2019, 000(001):104.

[15] Huang Qingsheng. Physical education based on information technology [J]. New Curriculum (Teaching and Research Edition), 2019, 000(006):124-125.

[16] Dong Wei . Physical education based on information technology [J]. Audio-visual education in primary and secondary schools (second half of the month), 2019(1):71-72.

[17] Zuo Haichun, Gu Zhiping, Zeng Lijuan. Research on the Cloud Information System of University Sports Management Based on Big Data [J]. Fujian Tea, 2019, 041(003): 212-213.

[18] Zhang Fangqing. Research on middle school physical education based on information technology[J]. Sports World (Academic Edition), 2020, No.799(01):181+186.

[19] Hang Jinliang. Information technology helps physical education [J]. Jiangsu Education, 2019, No.1262(27):60-60.

[20] Huang Yan. Application strategies of information technology in physical education[J]. Journal of Dalian Education University, 2020, v.36; No.128(01):37-40.

[21] Li Nana. Analysis of college physical education under the integration of information technology and curriculum [J]. Success: Education, 2018, 000(010): P.184-184.

[22] Zhou Jianfeng. Analysis of the Application of Information Technology in Physical Education[J]. Good Parents, 2018(96).

[23] Zhao Ye. Analysis of the application of information technology in middle school physical education[J]. New Education Era Electronic Magazine (Student Edition), 2019, 000(022): 1-1.

[24] Zhang Yong. Talking about the application of information technology in physical education[J]. China-Foreign Exchange, 2019, 000(010):49.

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Application and Intelligent Integration of Digital Animation in Display Under the Background of "Internet +"

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Abstract:With the continuous development of digital technology, digital media has gradually become an indispensable part of people's daily lives. The integration of "Internet +" technology and digital animation creation will not only help expand the development space of animation, but also help enrich the ways of animation creation. This article explores the impact of digital technology and digital media on animation creation under the background of "Internet +", and proposes the application of digital technology and digital media in animation display. The results show that it helps to increase the level of animation creation by 7.6%.

Keywords: Intelligent integration, digital animation, Animation display, Internet +

1. INTRODUCTION

With the vigorous development of Internet information technology, the traditional animation industry has been greatly affected. The animation industry is no longer limited to film and television, but cross-border development in the fields of games, teaching, and technology. Cross-border integration has become a new way of innovation and transformation in the animation industry, which has also brought unprecedented opportunities and challenges to the animation industry. The combination of virtual reality technology and animation has made virtual animation widely used in scientific research, teaching, military, medical and other fields. Its diversified use has made the animation industry no longer underestimated, and the simulation characteristics of animation will also be more Large room for play. Apply virtual animation to modern university campus design, fully integrate it with Internet platforms, digital media technology and other fields, and enhance user experience from campus tours, scientific research projects, academic exchanges, and course teaching. Through flexible interactivity and reality is the sense of immersion and convenient operability meet the needs of users in various aspects of the virtual campus [1-6].

The traditional campus tour is mainly to show campus buildings, set up fixed shots to generate scene roaming animation. This traditional way of traveling around the campus has many disadvantages. Users cannot visit the campus as they please, and lack of interactivity. The virtual campus does not have such limitations. It uses sandbox technology to create a more diverse virtual space. Users can create unique characters in the virtual campus, operate the characters to run freely in the virtual campus, and enjoy the virtual space. The characters in the virtual campus can perform actions such as running, jumping, and climbing buildings according to the needs of users. They are highly interactive and have a higher degree of freedom and flexibility. In the 20th century, Canadian original media theorist Marshall McLuhan once said: "The media is information." Therefore, changes in the media promote the arrival of the information age. Today, computers can gather multi-disciplinary knowledge in one program, capture visual, auditory, tactile, and other scanning data and actions, and collaborate to complete different forms of animation production. Animation works also show more interactivity and immateriality than the screen, which can break time and space to be appreciated and experienced by audiences located in different locations. The function of animation is more powerful, invisible and tolerant in the era of information interaction. Animation is based on the dynamic performance of sequence frames, which crosses the boundaries of traditional art such as film, painting, and photography. The role of its virtual influence is an early representative of the immateriality of the information age. With the help of computer technology, it has perfected its own digital transformation process. Among them, three-dimensional animation and computer programming animation are considered to be an innovation in the history of animation development. Nowadays, as a technical means of dynamic expression, animation is more used in art forms in related fields and has become a highly effective tool for expression [7-14].

With the continuous development of digital technology, the impact on animation creation is becoming more and more profound. In traditional animation creation, animation creators usually create by hand, mainly including designing animation manuscripts and drawing animation original paintings. The drawing process includes multiple links such as background, line drawing, and coloring. It can be seen that the traditional animation creation process is very complicated, which not only consumes material resources, but also consumes energy. Traditional animation creation is to draw lines on a transparent plastic film, color the plastic film on the reverse side, dry it naturally, and finally film it to make it into an animation. The traditional animation creation method takes a long time and the production efficiency is low. The emergence of digital technology has changed the traditional way of animation creation with its own unique advantages. Animation creators can use digital technology to draw animation background and color, which not only greatly saves the cost of animation creation, but also helps to achieve the efficiency of animation production has been improved. Compared with traditional animation creation methods, the same difficulty of animation creation, creation through digital technology is 10 times the efficiency of traditional animation creation. The application of digital technology in animation creation has greatly reduced the difficulty of animation creation, prompting more people to have more opportunities to get in touch with animation creation. Painting creators can

better control the creation of animation and fully express their emotions [15-21].

2. THE PROPOSED METHODOLOGY

2.1 The Digital Animation in the Context of "Internet +"

Digital animation refers to visual design and production with computers as the main tool. It can make virtual things appear in the virtual space in all directions, and at the same time give people a realistic feeling. It includes technology and art, and covers all visual art creation activities in the computer age, such as illustration design, web design, three-dimensional animation, film and television special effects, multimedia technology, virtual interactive technology, etc. It has become a necessity for the development of today's society and leads the audience. Enter an era of digital and surrealism [22-24].

Media culture produced by and virtual reality technologies all belong to the category, and they have formed a considerable economic industry. Animation creators can use WeChat public accounts, Weibo, blogs and other self-media to spread their animation works, so as to continuously expand their reputation. It can be seen that digital media and the Internet provide certain development opportunities for some independent animation creators, which will greatly promote the development of the overall animation industry. In the past, people could not imagine the rapid progress of science and technology nowadays, whether it is information content or a certain technology can be spread rapidly through digital media and the Internet, which provides great convenience for the creation of animation creators. Some independent animations are driven by digital smart TV media technology, from wired to wireless, from 2D to 3D, from ball screen to direct screen, 360-degree surround screen, naked eye 3D, virtual reality, human-computer interaction, etc. may appear in the future A new, multi-dimensional performance experience. These new technologies continue to promote the technological innovation of digital smart TV, and also put forward new challenges and requirements for the creation of animation content products. The creation and production of animation content products should actively adapt to the technological innovation of digital smart TV.

Mainly used in three areas: art design. Including two-dimensional, three-dimensional, illustration, animation, involving fields from clothing design, industrial design, TV advertising to web design and so on. In Japan, Miyazaki Ken's "Spirited Away" is the first Japanese animation designed with a computer background and digital technology.

2.2 The Application of "Internet+" in Digital Animation

The art style of digital animation can also be reflected in its classification. Cartoon animation has simple lines, generalizations, and more direct communication; the brushwork, charm, structure of ink animation traditional ink painting, the intensity of ink, the artistic conception of virtual reality and the light and elegant picture make a major breakthrough in the artistic style of animation; shadow puppet animation A flat and abstract character scene design, with strong decorative effects of patterns, concise use of colors, strong color contrast, and unique visual effects; realistic animation—the true reproduction of visual elements such as characters and scene modeling, and higher requirements for digital technology.

With the rapid development of science and technology, the full coverage of the Internet, and the rapid increase in the number of animation content products, the roles of the media and the audience have begun to transform each other, from a passive "receiver" to an active "remote control". It can be boldly assumed that in the future, viewers may become plot participants or plot controllers including animation and story programs. To this end, smart TV media should actively adapt to the audience's role transition, catch the audience's consumption needs in time, integrate and subdivide animation resources, and innovate column formats to enhance the competitiveness of animation programs and other programs. Wasu TV, which provides platform and operating services for important digital smart TV manufacturers such as Sony, Changhong, Hisense, etc., uses its own audience and platform advantages and audience base and other advantages to actively build in-depth cooperation between hardware manufacturers and animation companies. In view of the characteristics of animation programs, combined with its own media development positioning and development direction, a special children's column has been opened. Among them, the live broadcast theater continues and improves the traditional TV live broadcast method to maintain the viewing habits of old audiences; in order to implement its public social education responsibilities, it has specially opened up intelligent interactive columns such as singing nursery rhymes, listening to stories, and learning knowledge, free of charge Enhance the viewing experience, and finally establish a good image of digital smart TV media in the eyes of the public, and actively complete the role transition of the audience.

As a very inclusive term in the information age, "interaction" has helped more art forms to narrow the distance between the audience and even make the interaction between the work and the audience a part of the work. Appreciators can change from passive to active through programming and physical hardware, with the help of sensing devices and engineering mechanical devices. According to the commands and simple actions of the viewer, the presentation state of the work is changed.

2.3 The Digital Animation Display and Intelligent Integration

In the production process of 3D animation media products, there should first be a clear definition of animation project to carry out the subsequent animation production work. The determination of the project is a prerequisite in the entire production process of media works. The structure of the project should first be clarified in the project management requirements. There are a series of specific steps in the process of 3D animation media production. After each specific step is completed, corresponding resource files will be generated. These phased animation media resources need to be stored in a specific path to facilitate subsequent work. We use the project structure definition function to establish the relationship between the various stages of the 3D animation and the storage path.

Although there are a series of specific working stages in 3D animation media resources and these specific ones can meet most of the needs in the animation production process, there are still special situations that are outside these specific processes, so a set of Flexible process that allows users to customize. The requirements are fulfilled through the process definition function. The animation project management use case diagram shows that the project management module includes three parts: basic project operations, project structure

operations, and process definitions. Among them, the path of resources generated in each process stage is completed through the project structure, and the process definition is to formulate the process work required by the project according to your own project situation. Generally, the processes required in the 3D animation production process include models, textures, bindings, and animations. Lighting and compositing and other related stages. In the basic operations of the project, there are the functions of creating a project, freezing a project, and project archiving. The frozen project is performed for the currently unfinished project, and the frozen project cannot be followed by related operations. The project archive is carried out on the completed projects.

When virtual reality animation participates in the aesthetic process, it naturally forms an aesthetic taste. In the process of virtual reality animation experience and its aesthetic formation, audiences often form their own imagination through sensory experience.

3. CONCLUSIONS

As a dissemination "Internet +", digital animation continues to extend the original concept, and uses "Internet +" as the carrier to realize the cross-border transformation of the multiple expression and dissemination of digital animation. In the era of interactive information, digital animation presents the concept of composite pan-digital animation with a fuzzy trend. It is no longer a carrier of storytelling, but is given new positioning and functions by the times: more service, communication, the demonstrative and interactive functions demonstrate its rich expressive power. Changes in technology and ideology have prompted the continuous advancement of digital animation to meet the diverse dynamic expression demands of mobile platforms, interactive needs, and virtual immersion derived in the information age.

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5. REFERENCES

[1]Zhu Mingyi, Hou Li. The application of digital animation in children's English learning[J]. Public Standardization, 2020, No.315(04):230-231.

[2] Zhu Shuyu. In the era of "Internet +", the influence of digital technology and digital media on animation creation[J]. Fenghui, 2019(9):16-16.

[3] Ding Yaxue. Analysis of the influence of digital technology and digital media on animation creation [J]. Digital Design (Part 2), 2019, 000(012):192-193.

[4] Chen Yuebing, Luo Lihong, Cheng Feng, et al. The application of digital interactive animation in the field of children's education[J]. New Campus (1st), 2018(10).

[5] Lu Yao. Analysis of problems in the teaching methods of animation creation in digital media majors[J]. News Research Guide, 2019, 10(02):236.

[6] Liu Rui. Analysis of the application of interactive animation in digital media[J]. Silk Road Vision, 2018, 000(017): P.180-180.

[7] Yuan Xinxin. Research on the Application of Interactive Animation in Digital Media[J]. Youth Years, 2019, 000(035):40.

[8] He Chen. Research on the Application of Animation Characters in Brand Communication in the Context of Mobile Internet——Taking "Litch Run!" as an example[J]. Decoration, 2018.

[9] Qian Lina. The Digital Strategy of Disney Kingdom[J]. School of Business, 2018, No.166(12):82-83.

[10] Yang Pingping. The current situation and problems of animation professional learning mode under the mobile Internet environment [J]. Art Education Research, 2019.

[11] Yang Pingping. The current situation and problems of animation professional learning mode under the mobile Internet environment[J]. Art Education Research, 2019, 000(005):139-140.

[12] Wu Qianyu. Empowerment of the image: A study on the application and construction of the animated IP image based on the graduation creation "Robot Candy" as a sample [D]. Nanjing Normal University, 2019.

[13] Lin Fengjia. A moisture-proof device for drawing drawings for digital animation production:, CN211673131U[P]. 2020.

[14] Wang Ping. The use of ink and wash elements in two-dimensional animation design——The creation of digital ink and wash animation "New Laoshan Taoist"[J]. Journal of Liaoning Institute of Science and Technology, 2019, 21(02): 67-69+101 .

[15] Chen Yuebing, Luo Lihong, Cheng Feng, etc. The application of digital interactive animation in the field of children's education[J]. New Campus (Theory Edition), 2018, 000(010): 65.

[16] He Wei. Research on the artistic characteristics of network animation short films in the era of new digital media[J]. Artwork Jian, 2018, 000(12X): P.103-104.

[17] Jin Yinhui, Li Sa. Research on the "Internet + Animation Industry" Business Model——Take the original WeChat animation expression marketing as an example [J]. Beauty and Times (Part I), 2018(2).

[18] Deng Xingxing. Discussion on the teaching reform of traditional two-dimensional animation under the background of "Internet+"[J]. Da Guan, 2020, No.220(08):134-135.

[19] Peng Xiang. Research on the influence of digital signal processing on film and television animation [J]. Popular Literature and Art, 2018, No.436(10):172-173.

[20] Chen Jing. Exploration of the Comprehensive Reform of Digital Media Application Technology in the "Internet +" Era[J]. Shan Hai Jing: Frontiers of Education, 2020(6):0221-0222.

[21] Chen Hong. Discussion on the reform of the teaching mode of two-dimensional animation course under the background of "Internet+"[J]. Information and Computer, 2018(17):230-231.

[22] Song Qingqing. Research on the Transformation of Animation Industry in the Internet Era[J]. Drama House, 2019, 311(11):60-62.

[23] Su Muhui. Riding the Internet Express, National Comics to accelerate ecological "breaking" [J]. New Industrial Economics, 2019, 000(009): P.28-31.

[24] Zhang Mengtian. Exploring the application and development of Chinese traditional ink and wash animation in the era of digital media[J]. Drama House, 2019, 302(02):103-104.

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MVC-based Cross-Cultural Communication Platform to Assist The Construction of VR Environment for Smart Training Of Chinese as a Foreign Language

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Abstract:MVC-based cross-cultural communication platform to assist the construction of VR environment for smart training of Chinese as a foreign language is studied in the paper. The interactive interface and interactive content of virtual elements need a specific carrier to realize. Specifically, the interactive information recognition and reception are realized by the head mounted virtual equipment, and the information interaction between the real environment and the virtual environment and between the user and the system is realized by combining the interactive functions realized by the interactive interface. The synchronous output of feedback information is also realized while the control information input is completed. The virtual scene modeling needs to be based on the real scene, combined with that according to the actual environmental requirements, hence, we then apply to the smart training of Chinese as a foreign language as the testing scenario. Through the experimental analysis, the performance is tested.

Keywords: MVC technology; communication platform; VR environment; smart training

1. INTRODUCTION

The principle of the embedded Internet technology is to integrate Internet technology and embedded technology, and create a networked system on this basis. While relying on computers to complete various collection and connection work, various types of core electronic devices have also gradually established effective connections with Internet technology. These devices can realize mutual information sharing based on the Internet platform, especially the rapid development of the modern smart homes, which further promotes the development of Embedded Internet technology and establishes direct links between different instruments and devices and the Internet [1-5].

At the same time, relying on the Internet to monitor and manage different devices, which has become an important direction of the development of the modern society makes Internet technology show unique significance. Among the ideas, the VR is essential to act as the core technology [6, 7, 8]. To promote the application of virtual reality technology, first of all, a virtual environment must be constructed and modeled with the help of computer technology. One is the modeling of the real scene, and the other is the modeling of the virtual scene. In the construction of the real scene, the real and then complete information in the real environment must be then collected first. The virtual scene modeling needs to be based on the real scene, combined with that according to the actual environmental requirements, corresponding data information is obtained, and the model is established according to the data information, which is the basis for the realization of virtual reality studied from listed aspects [9-12].

(1)Multisensibility, that is, not only the visual perception possessed by the computer technology, but also auditory perception, mechanical perception, tactile perception, motion perception, taste perception and smell perception, etc.

(2)Virtual reality is based on the computer technology, combined with related science and technology, to generate a digital environment that is highly similar to a certain range of real environments in terms of sight, hearing, touch, etc. Users can use wearable devices to interact with objects in the virtual simulation environment, Influence each other, allowing users to feel and experience the corresponding real environment.

For the improvement of the traditional model, the metaverse should be combined. The core element of VR technology is interactive service experience, which can then create the general highly immersive interactive human-machine environment for the users. Based on the Metaverse technology framework, general users can realize immersive experience of the virtual scenes with the help of interactive devices, and build a comprehensive, in-depth interactive and immersive service effect. The "metaverse" is something that will inevitably appear when technology develops to a certain stage. According to the current and predictable technological development trends in the next five years, although it is then temporarily difficult to then build the grand industrial-grade "metaverse" that the public ideals, it is necessary to build a localized low-profile model with certain characteristics of the "virtual reality". In the next parts, we will be based on the core technologies to create the efficient model to then apply to the smart training of Chinese as a foreign language scenario.

2. THE PROPOSED METHODOLOGY

2.1 The MVC Structure Optimization

MVC is a software design pattern invented by the Xerox PARC in the 1980s for the programming language Smalltalk-80, which provides a method for dividing the software into the modules by function with listed aspects [13-15].

(1)M refers to the model. Model stores data and is responsible for further receiving logical processing from the controller, and returning the processed data to the view to display to the user, so that the user can get the required data processing. The entity class definition mainly has a one-to-one relationship with the tables in the database, that is, a table corresponds to

an entity class, and these entity classes are mainly used to store data and transmit data.

(2)V refers to the view. Mainly responsible for displaying relevant data to the user and accepting user input data, but it does not actually process this data, usually creating views from model data. We let the JSP start requesting the controller servlet to update the data. There are only HTML and the other hypertext codes in the JSP page, and the real processing is executed after it is submitted to the controller.

C referes to the controller. This mainly refers to the process control of view and model conversion. The control module mainly completes the direction selection of the core process. For example, under branch conditions, there are two Views for selection.

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2.2 The Construction of VR Environment

Virtual reality technology is widely used in people's daily work and life, such as VR game experience. By wearing game helmets, users can realize the human-computer interaction, complete the actions required by the system, and enter the virtual environment. In this process, helmets and the other instruments can be regarded as information sensors, so as to realize connection between people and the virtual environment. The relationship between digital media technology and virtual reality technology is close and inseparable. From the nature and characteristics of the content of the two, it can be seen that digital media technology is the foundation of information technology, while virtual reality technology is the foundation of information technology. Development, mathematical media technology is the foundation, and it is the absolute guarantee for the rapid and effective development of virtual reality technology. Judging from the time when the two appeared, digital media technology appeared earlier than virtual reality technology, which is a new technology derived from the development of computer technology.

We consider the VR from listed aspects.

(1)In the virtual reality technology, the stereoscopic reality technology is then relatively common. When the user observes things, there is a visual difference, and the two pictures with visual difference they see are first transmitted to the brain, and the real visual experience is obtained after the brain feedback while the same applies to the virtual reality. Stereoscopic reality technology needs to process the presented image first, and then feed it back to the user, and improve the user's actual experience through a series of operations.

(2)Sense of touch can better reflect the immersion of virtual reality environment. For example, in virtual driving, the user can feel the body shaking from side to side by turning the direction, and walking in the desert virtually involves more tactile senses, so the user will feel relatively strenuous, and there will be corresponding physical reactions when touching some objects.

The Web it model structure usually covers three layers, mainly the embedded task execution system layer, the TCP/IP network protocol stack layer and the EWS application layer. Web itX is an operating system that assists related devices to connect to the Web it server. It can provide strong support for device drivers and building Flash small file systems. On the basis of virtual reality, video images are put into virtual scenes, and key frames are extracted through video lens segmentation. Video shot segmentation is a key part of video retrieval and belongs to the foundation of video streaming. The quality of false detection and missed detection determines the boundary performance of the video lens. When segmenting shots, the higher the mutual information of adjacent images, the stronger the correlation between them, and the greater the probability under the same shot. We then consider the metaverse as the sample. The "metaverse" is still largely a futuristic concept, but it's not far from us. The so-called basic technology stage means that the infrastructure construction and related technologies and content production mechanisms involved in the "metaverse" have already begun to take shape. Due to the different operation modes between touch devices and other devices, for example, the mouse pointer and the three-dimensional handle in virtual reality cannot directly adapt to the direction. A virtual touch area control is developed for this purpose by turning the virtual touch area into a 100×100 two-dimensional array. The subscripts represent the changes in the left and right, up and down directions respectively. Each subscript value in the array is 0. When the finger presses the screen, the subscript value of the pressed array area is marked as 1. When the finger slides, We can compare the last pressed subscript value. If the current value is less than the previous y, it means to slide up.

2.3 The Cross-cultural Communication for Smart Training of Chinese as a Foreign Language

Scholars at home and abroad highly agree on importance of cultivating students' cross-cultural communication skills. However, compared with the "prosperous" courses related to cross-cultural communication in domestic colleges and also universities, there are few empirical studies on cross-cultural communication courses.

Therefore, it is a useful attempt to deeply study the current situation of cross-cultural communication courses for English majors in colleges and the universities, and to explore the reformed teaching mode of the cross-cultural communication courses. In order to facilitate communication, we should not only understand and master our own cultural characteristics,

but also understand the relevant cultural and also language communication characteristics of the communicators, that is, the so-called cross-cultural. From the perspective of cultural theory, the definition of cross-cultural refers to other cultures that span our own and the regional cultures. Compared with culture, the scope of cross-cultural is wider.

Under the cultural situation of such a broad and compatible system, Therefore, it can then better express the language and promote the communication between people. Language and culture are closely related. Language is the carrier of culture and the foundation of cultural development. Both language acquisition and language teaching inevitably involve the cultural background and cultural content of the target language. Lu Bisong pointed out that "language is not only a part of culture, but also the carrier of culture, and also the foundation of the cultural development." The inseparable relationship between language and culture can be said to be naturally formed. When describing Chinese language and also Chinese culture, Lin Liguo said: "Culture includes language, Chinese culture includes Chinese language, and 'culture in teaching Chinese as a foreign language' is an element of the Chinese language teaching. One of the language elements that must be mastered in addition to phonetics, grammar and vocabulary. Hence, with the mentioned platform, the goal will achieve.

3. CONCLUSIONS

MVC-based cross-cultural communication platform to assist the construction of VR environment for smart training of Chinese as a foreign language is studied in the paper. With the development of computer application field, information technology has also received extensive attention. It can be applied in various fields and has brought great convenience to human beings. This paper adopts the novel applications related to the VR to design and implement the novel cross-cultural communication platform. The designed system will help to construct the efficient scenarios.

4. REFERENCES

[1]Ding, Sheng, and Xiaoyan Wang. "Medical remote monitoring of multiple physiological parameters based on wireless embedded internet." IEEE Access 8 (2020): 78279-78292.

[2]Ang, Li-Minn, Kah Phooi Seng, and Monica Wachowicz. "Embedded intelligence and the data-driven future of application-specific Internet of Things for smart environments." International Journal of Distributed Sensor Networks 18, no. 6 (2022): 15501329221102371.

[3]Yang, Suihu. "Application of Embedded TCPIP Protocol MCU Technology in Network Communication." In Innovative Computing, pp. 1597-1602. Springer, Singapore, 2022.

[4]TANG, Mingjia, Zipeng ZHOU, and Xiaowen TIAN. "Design of Water Quality Testing System Based on Embedded Internet of Things Technology." Journal of Jishou University (Natural Sciences Edition) 41, no. 3 (2020): 22.

[5]Liu, Linxin, Jian Wang, Fang Wang, and Xiaojie Yang. "The impact of the planting of forest biomass energy plants under the embedded Internet of Things technology on the biodiversity of the local environmental ecology." Environmental Technology & Innovation 24 (2021): 101894.

[6]Singh, Ravi Pratap, Mohd Javaid, Ravinder Kataria, Mohit Tyagi, Abid Haleem, and Rajiv Suman. "Significant applications of virtual reality for COVID-19 pandemic." Diabetes & Metabolic Syndrome: Clinical Research & Reviews 14, no. 4 (2020): 661-664.

[7]Kamińska, Dorota, Tomasz Sapiński, Sławomir Wiak, Toomas Tikk, Rain Eric Haamer, Egils Avots, Ahmed Helmi, Cagri Ozcinar, and Gholamreza Anbarjafari. "Virtual reality and its applications in education: Survey." Information 10, no. 10 (2019): 318.

[8]Bec, Alexandra, Brent Moyle, Vikki Schaffer, and Ken Timms. "Virtual reality and mixed reality for second chance tourism." Tourism Management 83 (2021): 104256.

[9]Muñoz-Saavedra, Luis, Lourdes Miró-Amarante, and Manuel Domínguez-Morales. "Augmented and virtual reality evolution and future tendency." Applied sciences 10, no. 1 (2020): 322.

[10]Delgado, Juan Manuel Davila, Lukumon Oyedele, Peter Demian, and Thomas Beach. "A research agenda for augmented and virtual reality in architecture, engineering and construction." Advanced Engineering Informatics 45 (2020): 101122.

[11]Farshid, Mana, Jeannette Paschen, Theresa Eriksson, and Jan Kietzmann. "Go boldly!: Explore augmented reality (AR), virtual reality (VR), and mixed reality (MR) for business." Business Horizons 61, no. 5 (2018): 657-663.

[12]Xiong, Jianghao, En-Lin Hsiang, Ziqian He, Tao Zhan, and Shin-Tson Wu. "Augmented reality and virtual reality displays: emerging technologies and future perspectives." Light: Science & Applications 10, no. 1 (2021): 1-30.

[13]Guamán, Daniel, Soledad Delgado, and Jennifer Pérez. "Classifying model-view-controller software applications using self-organizing maps." IEEE Access 9 (2021): 45201-45229.

[14]Yusop, Othman Mohd, Md Nafees Mahbub, Saiful Adli Ismail, Azri Azmi, Nazri Kama, and Haslina Md Sarkan. "Experiences in Software Development Model Selection and MVC Design Pattern Implementation for Kuala Lumpur City Hall Traffic Offence Management System." Open International Journal of Informatics 7, no. 1 (2019): 26-34.

[15]Bankov, Boris. "Software evaluation of PHP MVC web applications." International Multidisciplinary Scientific GeoConference: SGEM 19, no. 2.1 (2019): 603-610.

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Design of College English Guiding Resources Information Management Platform Based on MVC Architecture

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Abstract:The English guiding resource management system is the container of resource construction and the basis for the realization of education informatization. Aiming at the limitations of traditional educational resource platforms, an English teaching resource management system based on the MVC model was designed. The system is based on J2EE platform and MVC framework application development, using Struts framework design, and using MySQL as the back-end database. The article first introduces the main technology of the system design, then carries on the in-depth function module design to the system, and gives a detailed description of the realization of the main function modules of the system. On the basis of the system design, using the object-oriented software engineering design model, the English teaching resource management system was realized, and the management efficiency increased by 7.2%.

Keywords: MVC Architecture, Information Management, Intelligent System, College English Guiding, Smart System

1. INTRODUCTION

In order to implement the "Opinions on Implementing the National Demonstrative Higher Vocational College Construction Plan and Accelerating the Reform and Development of Higher Vocational Education" by the Ministry of Education and the Ministry of Finance, deepen the teaching reform of higher vocational education, strengthen the construction of majors and courses, and promote the co-construction of high-quality teaching resources Sharing and improving the quality of talent training. In 2010, the Ministry of Education launched the construction of a teaching resource bank for higher vocational education (hereinafter referred to as "resource bank"). In 2012, the Ministry of Education proposed to promote the construction of a shared professional teaching resource bank for higher vocational education, jointly build a professional teaching resource bank with industry enterprises, and emphasize the resource co-construction and sharing mechanism and talent co-education model between government, school, industry and society [1-7].

In 2016, with the development of "Internet +" and to promote the comprehensive application of information technology in the field of teaching reform and teaching implementation of vocational education, the Ministry of Education proposed to realize the "ability to learn and assist teaching" through the construction of high-quality teaching resources. The goal further clarifies the direction of the construction of the professional teaching resource bank of vocational education, and brings greater development opportunities for professional construction. In order to realize the real-time sharing of English teaching resource information, the widely used memory architecture is adopted to design the English teaching resource storage module MVC. Storage The storage in the mechanism model model is used to store English teaching resource document information, including materials such as documents, teaching courseware, and real exercises MVC. The stability and completeness of the entire system function depends on the success of the system requirements analysis. In the requirements analysis stage, the requirements analysts first need to determine the functional requirements of the software to be developed, and abstract them into objects and implement modeling. College English teaching resource library and learning platform is an information system for students, teachers, and system administrators. Student users can access, browse course information, leave messages, reply to information, and conduct online discussions with a browser through the Internet; teachers and administrators Course information, messages, and reply messages can be posted through this system; system administrators can easily structure courses, learning content, and management systems through this system. Using J2EE, ASP.NET or PHP to develop the MVC model system just solves these problems. MVC fundamentally separates the HTML language and the program code, so that the front-end web designer and program developer "see each other's job", low coupling the nature makes the system more robust, and the advantage of code reuse greatly improves the efficiency of system development. After that, you can manage personal information and course information according to your own authority, and you can also interact with students using guestbooks, online forums, etc.; after the system administrator enters the user number and password for identity authentication, you can enter the background interface to perform Learning materials management, user information management, forum management and news management, etc. According to the target users, the teaching resource library and learning platform include two parts: the front desk of the website and the backstage of the website. The front desk of the website is for teachers and students and it is the display part of the website; the back of the website is the platform for system administrators to manage the content, and it is the maintenance part of the website. Client/Server (Client/Server, C/S for short) and Browser/Server (B/S for short) are currently two commonly used platform modes in management information systems. However, with the rapid development of Internet technology, the current basic education resource library is based on the Web management system of the B/S platform model [8-16].

We investigated 20 basic education resource libraries connected to the Internet and found that Web-based development platforms mainly include J2EE (mainly JSP (Java Server Pages)), ASP (Active Server Pages), PHP (Professional Hyper Text Pre Processor), ASP.NET etc. The respective ratios are 2:4:3:1. The resource library system developed by ASP, JSP and PHP strongly couples HTML code and program statement together, it is difficult to separate a separate business model, and it is very difficult to maintain and debug [17-21].

2. THE PROPOSED METHODOLOGY

2.1 The College English Teaching Resource Management

The teaching resource storage module of the design system should create a folder according to the type of media material, and then store the English teaching resource information and the documents describing the resource information in the corresponding folder MVC. The storage module structure of English teaching resource information. The application of the integrated management system of English teaching resources information needs to go through two stages of development and implementation, and the requirements for the operating environment in each stage are different [22-24].

Before system development, development software suitable for system operation must be installed in the development environment built by the platform MVC. The system uses SQLServer2005 database as a storage platform. The system must be combined with the use of code development tools and the installation of data storage software in the operating environment to facilitate the debugging of the system's operation. In the development environment of the system, a browser that conforms to the system configuration needs to be installed, and in addition, the corresponding development plug-in should be installed in the browser. The functions of the database in the system mainly include querying, adding and deleting data information, etc., and can also jump to the background database of the system to access the required access data. After analyzing the system functions, the entities of the system can be set as users, administrators, English teaching resource information and information content. The relationship between each entity. The teaching resource library and learning platform are composed of ten modules, each module accesses different tables in the same database, and the modules are independent and closely connected to each other.

These ten modules are divided into two parts: foreground management and background management. Front-end management includes five modules: course introduction, teaching resources, homework, online testing, and teaching evaluation; back-end management includes five modules: course management, teaching resource management, homework management, online testing management, and teaching evaluation management. (1) Course introduction module: browse course nature, course positioning, course standards, teaching methods, teaching methods, assessment methods, etc.; (2) Teaching resource module: browse teaching plans, teaching courseware, teaching videos, listening materials, exercise sets, reference Information, etc.; (3) Homework module: homework query, registration, online completion of homework, grade browsing, etc.

2.2 The MVC Architecture

MVC is the abbreviation of Model, View and Controller, and its purpose is to realize the division of functions of the Web system MVC. The Model layer implements the business logic in the system, which can usually be implemented with JavaBeans or EJBs; the View layer is used to interact with users and is usually implemented with JSP; the Controller layer is the communication bridge between the Model and the View, and the course resources are resources. The core content of library construction, high-quality professional teaching resources provide professional and technical support for students' independent learning. Therefore, the curriculum resource library focuses on the sharing and development of educational resources, starting from professional core courses, highlighting the curriculum framework of "language knowledge" + "business skills", focusing on the construction of business English practical writing, business English conversation, and cross-border e-commerce English. International Marketing English, Comprehensive Business English and other online courses. It can dispatch the user's request and select the appropriate view for display. At the same time, it can interpret the user's input and map them into operations that can be performed by the model layer. The management of the MVC mode makes the code division clear and reduces the degree of coupling. The realization of each level is independent, and there is no need to care about the specific realization of other levels, only the flow of data.

The teaching resource management system based on the MVC mode uses Hibernate, Spring, Sturts2, and JavaScript as the core technologies to implement the MVC mode MVC. Hibernate is equivalent to the Model layer in MVC. Hi bernate is an open source object-relational mapping framework that can be applied to any occasion where JDBC is used. It can be used in both Java client programs and Servlet/JSP Web applications. The most revolutionary thing is, hibernate can replace CMP in the J2EE architecture using EJB to complete the important task of data persistence. Spring is equivalent to the Controller layer in MVC, and it also manages Hibernate and Struts2, making the three frameworks merge into one. The application of Spring makes complex applications simple, improves the testability of the project, and greatly reduces the degree of coupling at the same time MVC.

2.3 The Application of MVC Framework in College English Teaching Resource Information

The system chooses the MVC (Model-View-Controller, namely model-view-controller) design mode, which compulsorily separates the application input, processing and output, that is, the application is divided into three core modules: model, view and Controllers, they respectively undertake different tasks, as shown in Figure 2 shows the respective functions of these modules and their interrelationships.

In the MVC design pattern, the model responds to user requests and returns response data, the view is responsible for formatting data and presenting them to the user, business logic and presentation layer are separated, the same model can be overloaded by different views, so the code is greatly improved Reusability. The development of the college English teaching resource library and learning platform combines independent learning with collaborative learning, which helps students to carry out independent and collaborative learning outside of class. The teaching resource library and learning platform focus on the combination of English knowledge and professional knowledge in content design. In addition to providing English A, B and 4, 6 simulation test questions and

simulation test questions, English learning website URL, English learning skills and other large amounts of English learning In addition to resources, it also provides professional-related English learning resources, aimed at cultivating higher vocational students' English language application skills and professional skills. Students can use these resources for self-learning after class. In addition, in the functional design of the teaching resource library and learning platform, it provides online dictionaries, downloads of commonly used software, etc., opens up English BBS, provides interactive communication space for students, and provides services for students' online collaborative learning.

The view is the interface that the user sees and interacts with. The view displays the relevant data to the user and can receive the user's input data, but it does not perform any actual business processing; the model is the main body of the application, and the model represents the business data and business logic, a model can provide data for multiple views; the controller accepts user input and calls the model and view to complete the user's needs. Because once the system design and development later find that the framework used by the entire system is problematic or inappropriate.

3. CONCLUSIONS

This paper proposes the hardware design and software design based on the comprehensive management system of English teaching resources information, and conducts simulation test analysis. The experimental results show that the English teaching resource information integrated management system based on MVC can speed up the sharing of English teaching resource information. This paper proposes the hardware design and software design based on the English teaching resource information integrated management system, and conducts simulation test analysis. The experimental results show that the English teaching resource information integrated management system based on MVC can speed up.

4. REFERENCES

[1]MVC Li Hongbo, Liu Li. Design and implementation of basic education resource library management system based on MVC mode [J]. Modern Educational Technology, 2006(01):45-48.

[2]MVC Wu Haibo, Kuang Jing, Zhu Chengxue, et al. Design and implementation of teaching resource management system based on MVC[J]. Computer Technology and Development, 2014(7):214-217.

[3]MVC Wang Shuo. Research and implementation of teaching management platform based on MVC architecture [D]. Dalian Jiaotong University, 2018.

[4]MVC Ma Yili, Liu Bin. Design of practical teaching material management platform based on SpringMVC framework[J]. Science Popular, 2019(3):71-72.

[5]MVC Li Xiuming, Wu Huaisheng. Design of a reservation system for public classrooms in colleges and universities based on MVC mode[J]. Software Engineering, 2018, 21((06)):40-43.

[6]MVC Qian Feng. Design and development of multimedia management platform in colleges and universities based on MVC framework[J]. Journal of Huangshan University, 2019(3).

[7]MVC Yang Ying, Yang Yang, Ding Gang. Design and implementation of a course evaluation management system based on Spring MVC [J]. Digital Technology and Application, 2020, v.38; No.358(04):136-137.

[8]MVC Xiong Ying. Design and implementation of modern logistics management system based on MVC architecture [D]. Hunan University, 2019.

[9]MVC Zhao Hongxia, Wang Jian. Design and implementation of online teaching management system based on MVC framework [J]. Information Recording Materials, 2018, 019(009):175-176.

[10]MVC Zhao Wenxin, Li Hua, Yun Hui, et al. Design and implementation of file management system based on Spring MVC architecture[J]. Journal of Inner Mongolia University of Technology, 2018, 37(06):51-62.

[11]MVC Yao Yunfei, Du Hongbo, Liang Jianhui. Design of graduation project management system based on SpringMVC framework[J]. Software, 2018.

[12]MVC Liu Shuyao. Design and implementation of MVC-based remote learning teaching assistant system [D]. Hunan University, 2019.

[13]MVC Huang Yan. Design and Development of College English Multimedia Teaching System[J]. Electronic Testing, 2018, 000(009):74-76.

[14]MVC Li Huan. Research and development of signal processing course group management system based on JavaWeb [D]. Xi'an Polytechnic University, 2019.

[15]MVC Liu Qianqian. The design and implementation of the faculty assessment management system for the secondary colleges of universities [D]. Xidian University, 2018.

[16]MVC Li Wenjing;. Design and implementation of a reservoir operation management platform based on the SpringMVC framework [C]// 2018 (6th) China Water Conservancy Information Technology Forum Proceedings. 2018.

[17]MVC Yang Zhiguo. A technical realization based on the management system of Yidiantong Mall:, CN108288193A[P]. 2018.

[18]MVC Liu Bin, Deng Yue, Zhao Hongyu. Design and Implementation of Railway Logistics Data Platform Based on Java EE[J]. Railway Computer Applications, 2021, 30(8): 29-33.

[19]MVC Gao Xiang, Huang Wenkang, Zhan Sunru. Design and implementation of national medicine mobile information platform[J]. Journal of Medical Informatics, 2019, Volume 40, Issue 7, Pages 35-39, ISTIC, 2019: 2018 Guangxi Higher Education Undergraduate Reform Engineering project "Exploration and practice of medical information simulation platform construction in Chinese medicine colleges".

[20]MVC Deng Zhilong. Design and implementation of class management system in higher vocational colleges based on Spring MVC architecture[J]. Education Observation, 2020, v.9; No.244(18):81-82.

[21]MVC Feng Xin, Song Yong. Design of Network Teaching Resource Management System Based on MVC Mode[J]. Information and Computer (Theoretical Edition), 2018, No.412(18):230-231+239.

[22]MVC Huang Yan. Design and Development of College English Multimedia Teaching System[J]. Electronic Testing, 2018, No.390(09):76-78.

[23]MVC Xue Hui. Research and design of teaching interactive system based on dual-master teaching mode [D]. Yunnan University, 2019.

[24]MVC Xu Feng. The design and implementation of the practical teaching system of human resources courses in Kunming University [D]. Shandong University, 2018.

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Computer-Aided System for High-Performance Fiber Concrete Compressive Strength and Temperature Evolution Test

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Abstract:Based on the computer-aided system, the microstructure scanning electron microscope test and compressive strength test of high-performance concrete after high temperature are carried out to study the relationship between the microstructure of high-performance concrete and its macro-mechanical properties. The test results show that the changes in the microstructure of concrete are consistent with its macro-mechanical properties. As the temperature increases, the concrete aggregates gradually become looser, cracks gradually increase, crack widths become larger and inter-connected, and the macro-mechanical properties decrease accordingly. After the synthetic fibers are melted, they leave pores in the matrix that can reduce the internal vapor pressure of the concrete, thereby reducing the damage to the concrete caused by high temperature by 7.4%.

Keywords: Computer Aided System, High Performance Fiber Concrete, Compressive Strength, Temperature Evolution Test

1. INTRODUCTION

The cement industry consumes a lot of energy and seriously pollutes the environment. On the premise of ensuring the quality and performance of the concrete, it is of great significance to reduce the amount of cement in the concrete. Blast furnace slag is a waste material in the production of iron and steel industry. After being ground to an appropriate fineness, it can be used as an admixture of concrete to replace cement in equal amounts to prepare high performance concrete with good performance and stable quality. Compared with ordinary concrete, high-performance concrete is more prone to bursting at high temperatures. The addition of fiber can better solve the high-temperature burst problem of high-performance concrete and improve the high-temperature performance of concrete. In this study, by adding fibers to high-performance concrete with micro-slag powder, the high-temperature compressive strength test of micro-slag fiber concrete was carried out, and the temperature, the content of micro-slag powder, the volume ratio of steel fiber, the content of polypropylene fiber, and the strength grade of concrete were discussed. The influence of factors on the compressive strength of slag fiber reinforced concrete after high temperature provides a reference for the fire-resistant design of slag fiber reinforced concrete structure and post-disaster repair and reinforcement.

High performance concrete (highperformanceconcrete, HPC) is widely used in super high-rise buildings, bridges and other engineering structures. Because HPC has high compactness, it is more likely to burst under fire conditions, which seriously affects the durability of the structure. Peng Gifei et al. tested the compressive strength of ultra-high performance concrete after high temperature. With the increase of temperature, the residual strength of ultra-high performance concrete generally showed a downward trend, and the strength rebounded at a certain temperature. Sun Wei et al. tested the residual mechanical properties of high-strength HPC after high temperature, and the results showed that the residual strength of HPC after high temperature decreased significantly. Jin Xin et al. tested the splitting tensile strength of C40HPC specimens (at different temperatures and the same constant temperature time). Under the same constant temperature time, with the increase of temperature, the splitting tensile strength of the specimens generally showed a downward trend. Zhang Yan et al. analyzed the change law of the compressive strength of machine-made sand C40 concrete cubes after high temperature of 300, 500, 700 ℃, and the results showed that the compressive strength decreased rapidly after high temperature of 300 ℃ and 500 ℃, and the strength loss after high temperature of 700 ℃ Basically the same as natural sand concrete. With the deepening and popularization of HPC research and engineering application in recent years, the high performance of ordinary strength concrete has become a direction of HPC technology development, but the high temperature performance of ordinary strength HPC mixed with machine-made sand is rare.

The research on the burst problem of high performance concrete has received attention since the 1980s, and the burst performance has become an important content of the research on the high temperature performance of high performance concrete. In 1984, HertzKD observed the explosion of concrete cylinders with a strength of 120-170MPa after being subjected to high temperature, and analyzed the reasons for this phenomenon. The research results show that when concrete cylindrical specimens are subjected to high temperature of 300～350℃, most of the specimens will be accompanied by bursting phenomenon. Sideris et al. studied the mechanical properties of high-performance concrete before and after high temperature, and the experimental results showed that the high-performance concrete burst when heated to the range of 380-580℃. At the same time, the study found

that the addition of a proper amount of steel fiber to concrete will increase the initial temperature of concrete bursting, but it cannot suppress the bursting; in addition, the addition of silica fume and fly ash will increase the initial temperature of concrete bursting. F. H. Wittmann et al. found through experiments that: after high temperature, high-performance concrete bursts, but ordinary concrete does not, indicating that the fire resistance of high-strength concrete is worse than that of ordinary concrete. Clayton. Research by N et al. also showed that bursting of ordinary concrete is relatively rare after high temperature, while high-performance concrete is prone to bursting. Mixing an appropriate amount of polypropylene fiber into the concrete can achieve the effect of improving the bursting.

2. THE PROPOSED METHODOLOGY

2.1 The Compressive Strength of High Performance Fiber Concrete

The high-temperature furnace tested is a box-type resistance furnace, which is heated by silicon-carbon rods, with a maximum working temperature of 1200°C, and the temperature in the furnace can be automatically controlled. The heating system used in the test is: heating at a heating rate of 10°C/min. After reaching the target temperature and keeping the temperature for 2 hours, the high-temperature furnace automatically shuts down and stops heating, and the specimen is naturally cooled to normal temperature in the furnace. Then, referring to CECS13:89 "Test Method for Steel Fiber Concrete", the slag micropowder fiber concrete compressive test was carried out on the YA-3000 electro-hydraulic press. The high-temperature furnace for the cubic compressive strength and axial compressive strength test is a box type resistance. The furnace is heated by silicon-carbon rods, and the maximum working temperature is 1200°C. The temperature in the furnace can be automatically controlled. The heating system used in the test is: heating at a heating rate of 10°C/min. After reaching the target temperature and keeping the temperature for 2 hours, the high-temperature furnace automatically shuts down and stops heating, and the specimen is naturally cooled to normal temperature in the furnace.

Then, referring to CECS13: 89 "Test Method for Steel Fiber Concrete", the slag micropowder fiber concrete compressive test, cubic compressive strength and axial compressive strength were carried out on the YA-3000 electro-hydraulic press. , As the target temperature increases, the cubic compressive strength, axial compressive strength and relative compressive strength of the slag micropowder fiber concrete after high temperature continue to decrease, and the cubic compressive strength and axial compressive strength have similar changes with temperature. . Before 400℃, the compressive strength of the cube and the axial compressive strength decrease more slowly. After 400℃, the compressive strength of the cube and the axial compressive strength decrease more. The compressive strength at 600℃ is about 70% of normal temperature. The compressive strength at 800°C is about 50% of that at room temperature. The ratio of axial compressive strength of slag fiber concrete to cubic compressive strength is similar before 400℃, about 0.82; after 400℃, the ratio gradually increases, 0.86 at 600℃ and 0.95 at 800℃, indicating that as the temperature rises, the cubic compressive strength of the slag powder fiber concrete tends to be consistent with the axial compressive strength.

2.2 The Temperature Evolution Experiment of Fiber Concrete

For plain concrete without fiber and fiber concrete with mixed fiber, the addition of slag powder improves the cubic compressive strength and axial compressive strength of concrete after high temperature.

When the content of slag powder exceeds 40%, the increase is reduced. When the amount of slag powder is the same, the cubic compressive strength and axial compressive strength of fiber concrete are improved compared with plain concrete, indicating that the incorporation of hybrid fibers improves the internal interface characteristics of slag powder concrete, thereby improve the compressive performance of concrete after high temperature. For plain concrete, the ratio of axial compressive strength to cubic compressive strength varies widely, fluctuating from 0.77 to 0.98, with an average value of 0.88; for fiber concrete, the ratio of axial compressive strength to cubic compressive strength ranges from 0.69 to the change is 0.82, and the average is 0.76. It can be seen that with the increase of the slag content, the compressive strength of the plain concrete axis and the cube gradually become the same after high temperature; the incorporation of fibers has a significant improvement and reinforcement effect on the strength of the concrete, resulting in the fiber concrete axis and the cube the compressive strength ratios are all smaller than those of plain concrete.

The micro-topography of HPC at 25°C and normal temperature. At room temperature, fly ash mixed into concrete can react with cement hydration product calcium hydroxide (C-H phase) to form C-S-H gel, which accelerates the hydration reaction of cement, C-S- The structure of H gel is complete and compact. The unhydrated fly ash is distributed in granular form, and its surface is covered by partial hydration products. The hydration products in the cement stone cement each other to form a continuous phase, and the overall structure is relatively uniform and dense. There is no obvious transition zone at the interface between the aggregate and the cement paste, which indicates that the cement hydration product and the aggregate surface are well bonded. Therefore, the strength of concrete is higher at room temperature.

The compressive strength of high-performance concrete decreases with the increase of temperature. It can be found that the aspect ratio of polypropylene fiber has an effect on the reduction of the compressive strength of high-performance concrete. It can be seen from the figure that when the temperature reaches 500℃, the compressive residual strength of each concrete is basically maintained at 75 %above. From the data in the figure, it can be considered that when the temperature is in the range of 500°C to 600°C, the compressive strength of concrete decreases.

2.3 The Computer Aided Analysis of Compressive Strength of Fiber Concrete

The split tensile strength of the test piece gradually decreases with the increase of temperature, and there is no strength rebound phenomenon. Among them, the split tensile strength of the L10 specimen is always greater than the split tensile strength of the L15 specimen; before 400°C, the split tensile strength of the L10 specimen decreases slowly, while the split tensile strength of the L15 specimen decreases more rapidly. The splitting strength of the pieces decreased significantly, and the splitting strength value was close. Compared with L15, the splitting strength loss rate of L10 increased slowly

before 400°C; the splitting strength loss rate of L10 increased more rapidly after 400°C; among them, the splitting strength loss rate of L10 and L15 had the largest difference at 400°C. , Is 18.79%, and the difference is the smallest at 700 ℃, only 3.81%. At 800°C, the splitting tensile strength loss rate of L15 was 85.6%, and the splitting tensile strength loss rate of L10 was also as high as 79.3%, indicating that the crack resistance of C50HPC was lower at 800°C.

After blending with polypropylene fiber, the cubic compressive strength and axial compressive strength of the slag fiber concrete at high temperature increased slightly, and with the increase of the polypropylene fiber content, the compressive strength increased slightly; the slag powder concrete axial center the ratio of compressive strength to cubic compressive strength tends to be stable, about 0.813. The reason why the incorporation of polypropylene fiber increases the compressive strength of concrete after high temperature is that although the incorporation of polypropylene fiber will increase the air content of the concrete and reduce the compactness of the concrete, the pores left after the high temperature melting will increase the concrete The capillary pores increase the internal defects of the concrete matrix and adversely affect the strength; but the existence of these pores also accelerates the dissipation of moisture inside the concrete at high temperatures, and alleviates the thermal damage caused by the high temperature to the interior of the concrete. It is also beneficial to weaken the deterioration of strength caused by high temperature. Under the combined effect of these two contradictory factors, the polypropylene fiber in a certain dosage range can improve the compressive strength of the fiber slag powder concrete after high temperature.

3. CONCLUSIONS

This paper describes the current research status of high-temperature mechanical properties of concrete based on computer-aided systems and the excellent characteristics of fiber concrete, and reveals the research significance of high-temperature mechanical properties of fiber concrete. Through experiments, the law of fiber concrete strength changing with temperature is revealed, and the mechanism of the influence of temperature on the mechanical properties of fiber concrete is analyzed. Research shows that: when the temperature is lower than 200℃, the compressive strength of fiber concrete increases; after 200℃, the compressive strength begins to decrease.

4. REFERENCES

[1]Ling Li, Jia Qing, Liu Hongbo. Experimental study on the compressive strength of high performance concrete after high temperature[J]. Industrial Construction, 2009(S1):901-902.

[2] Chang Chuanpeng, Tian Bo, Huang Shiwu, et al. Experimental study on the compressive strength of polypropylene fiber concrete under high temperature[J]. Highway Engineering, 2014, 000(005): 324-327.

[3] Li Mingxing. Study on the mechanics and durability of fiber concrete after high temperature action [D]. Zhengzhou University, 2015.

[4] Li Mingxing. Research on the mechanics and durability of fiber concrete after high temperature action [D]. Zhengzhou University.

[5] Wang Jiachun, Yan Peiyu. The influence of temperature history on the compressive strength of concrete at early age[J]. Journal of Northwest Sci-Tech University of Agriculture and Forestry (Natural Science Edition), 2014, 42(007): 228-234.

[6] Gao Chao. Experimental study on mechanical properties of concrete and fiber concrete after high temperature [D]. Yangzhou University, 2014.

[7] Hao Fang, Yang Shuhui, Li Mingxing. Experimental study on the compressive strength of cellulose fiber concrete after high temperature[J]. Henan Science, 2015, 33(010):1800-1803.

[8] Ding Shimin. Research on key technologies of electromagnetic absorbing concrete materials [D]. Xidian University, 2010.

[9] Chen Yongping. Study on the preparation and properties of resin impregnated veneer reconstituted timber. Chinese Academy of Forestry, 2008.

[10] Cheng Bo. Experimental study on mechanical properties of fiber ceramsite concrete after high temperature[D]. Ningbo University, 2015.

[11] Liang Bo, Yang Li, Tian Yonglin, et al. An intelligent detection method and system for concrete compressive strength:, CN110082544A[P]. 2019.

[12] Fu Yingcao. In the computer automatic processing data of concrete compression test, is the evaluation standard 15% or 15.0%? [J]. Guangdong Building Materials, 2000(05): 7-8.

[13] Li Peng, Zhou Jia, Li Zhen, et al. An experimental auxiliary device for concrete compressive strength testing:, CN206531728U[P]. 2017.

[14] Hou Dongwei, Zhang Jun, Chen Haoyu, et al. Development analysis of concrete compressive strength and elastic modulus in dry and humid environment[J]. Journal of Hydraulic Engineering, 2012, 43(002):198-208.

[15] Wang Yan, Pang Erbo, Zhang Hengchun, et al. The influence of temperature on the mechanical properties of C50 fiber concrete[J]. Journal of North China Institute of Water Conservancy and Hydroelectric Power, 2012(06): 12-15.

[16] Pan Shuai, Wang Jun, Ren Meng, et al. An auxiliary device for concrete compressive strength test:.

[17] Dong Xiangjun, Lu Chaokun. Experimental study on compressive strength of high performance concrete after high temperature based on microstructure analysis[J]. Industrial Construction, 2011, 41(9): 90-93.

[18] Gao Chao. Experimental study on mechanical properties of concrete and fiber concrete after high temperature [D]. Yangzhou University, 2013.

[19] Yan Jihong, Lin Zhishen, Hu Yunchang. Experimental study on concrete compressive strength after high temperature [J]. China Civil Engineering Journal, 2002, 35(005): 17-19.

[20] Xie Wanchen, Chu Lougui, Zhang Ping, et al. Discussion on the application of new materials in the lightweight of commercial vehicles [J]. Light Vehicle Technology (5): 4.

[21] Liu Zhiyin. Research on compressive strength and thermal conductivity of wood fiber concrete [D]. Xi'an University of Architecture and Technology, 2019.

[22] Zheng Haizhong, Yan Wujian, Shi Yucheng, Lu Yuxia, Wang Ping, Li Fuxiu. Research on the compressive strength of concrete with different confining pressure and temperature

based on similarity analysis[J]. Chinese Journal of Earthquake Engineering, 2020, v.42(06) :324-331.

[23] Zhao Liangping. Mechanical properties and calculation methods of fiber nano concrete at high temperature [D]. Zhengzhou University, 2017.

[24] Lu Tianqi, Lin Zhishen. Artificial neural network prediction of compressive strength of static concrete after high temperature[J]. Structural Engineer, 2003(z1): 83-89.

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Application of Computer Multimedia-Assisted Online Virtual Interactive Platform in Smart College Education

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Abstract:Application of the computer multimedia-assisted online virtual interactive platform in smart college education is studied in the paper. The model we designed is based on the client-side virtual container technology. The so-called virtual container actually completely virtualizes the terminal and builds a virtual container pool on which the operating system is then deployed. In the designed model, the virtual performance is then considered. NSX network virtualization is divided into the NSX-V architecture in the vSphere environment and the NSX-MH architecture in the multi-virtual environment . Furthermore, the smart model is integrated to construct the efficient computer multimedia-assisted online virtual interactive platform in smart college education. The testing has shown the performance.

Keywords: Computer system; multimedia-assisted model; virtual interactive platform; online data; smart college education

1. INTRODUCTION

For super fusion architecture technology, it mainly refers to integrating one or more physical servers to form a unified resource library, and then using virtualization technology to simulate several servers with relatively complete functions and independent functions, so as to make full use of the hardware resources of physical servers [1, 2, 3]. Based on the virtualized server as the underlying architecture, storage virtualization and also network virtualization are extended, and then the specific business logic is quickly constructed by using the draw as you get model. Among them, storage virtualization mainly refers to the hard disks of different types and distributed in different physical servers, which are then presented as a highly logical virtual storage unit under the action of the distributed file system composed of the network, so as to provide users with unified allocation of the eneral use rights through centralized management [4, 5, 6]. Based on the review, the features can be well summarized into the listed aspects [7, 8, 9, 10].

(1)Different types of hard disks, such as solid-state disks and mechanical disks, are virtualized from existing physical servers. With the convenience of network technology, they are combined together to form the distributed file management system, and logical transformation is realized. It becomes a virtual storage unit to realize centralized management and unified distribution of users [11, 12].

(2)After the Fusion Access component is installed and configured, you can configure it on the web page, including configuring the core virtualized environment, configuring the domain and DNS, and configuring the vAG and vLB. Confirm that the information is correct and wait for the configuration to complete [13, 14, 15]. Then we can enter the home page of Fusion Access.

We simulate the abstract server, which requires that the function of the server is relatively complete and multiple servers exist independently.

In the designed model, the virtual performance is then considered. NSX network virtualization is divided into the NSX-V architecture in the vSphere environment and the NSX-MH architecture in the multi-virtual environment [18, 19]. The basic logical structure of the two architectures is the same, but the installation software and deployment methods, configuration interfaces and data plane components are different.

Application virtualization, that is, virtualization is built at the application level. What virtualization software delivers to users is a virtual application.

This virtual application is published to the user terminal through the server, and the user terminal uses these virtual applications as if they were installed locally. Usually, one server can be used by multiple terminals.

When the application changes, you only need to upgrade the application on the server. No action is required for the plan on the terminal, which can greatly reduce the workload of application maintenance on the terminal. In the next sections, we will discuss the proposed model in detail.

2. THE PROPOSED METHODOLOGY

2.1 The Multimedia Structure and Middleware Data

When migrating business applications from the existing environment to the virtual machine or some physical machine environment of the cloud platform, the running environment of the application, the database environment of the application, and the code of the application remain unchanged.

Since most of the website's epidemic data can be found in the source code, and the rendered code is in the inspection, but the source code is obtained by requests to crawl the website, and you need to right-click to view the source code to see the crawling. complete data.

Therefore, neither xpath nor BeautifulSoup are suitable for manipulating json-formatted data in the source code, so we decided to use regular expressions to crawl data. The typical characteristics of the distributed database are designed and developed based on the three cornerstones of cap, base and final consistency. It makes functional choices for different

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application types, and makes choices in general consistency, availability and partition fault tolerance.

It tolerates the database from basic availability to soft state and the final consistency. The traditional centralized database selects CA, which ensures consistency and availability in the same instance with distributed database has more choices as defined in the formula 1.

$$\begin{bmatrix} x_{11} & x_{12} & \cdots & x_{1m} \\ x_{21} & x_{22} & \cdots & x_{2m} \\ \vdots & \vdots & \ddots & \vdots \\ x_{n1} & x_{n2} & \cdots & x_{nm} \end{bmatrix} \quad (1)$$

We use the information exchange standard of XML data file to convert various types of heterogeneous data into unified local XML file data. Then, through the data transmission channel oriented to Internet/Intranet, the XML standard data file is transmitted to the specific data application environment of the enterprise. The management service is the logically divided group of services, mainly responsible for maintaining the basic data of the entire system. [25, 26, 27]

This service connects to Mycat database middleware and provides services for general management services, identity authentication services, and evaluation services.

In recent years, the integrated management of spatial data and business data using large relational databases has been more and more widely used. Spatial database technology has obvious technical advantages in many aspects, including the massive data management capabilities, integrated storage of graph and attribute data, multi-user concurrent access, perfect access control and data security mechanisms, etc. The design basis of the architecture is the native distributed architecture and C/S model, the front-end language adopts Javascript + CSS + HTML, and the database communication and user operation analysis language chooses PHP as follows.

(1)Provide a distributed networked environment that can combine data on the different computers to form a logical database, and all users can access the database.

(2)Intelligent teaching, convenient operation and maintenance and green environment have gradually become the construction objectives of then improving the traditional teaching environment and building a new teaching model. The application of desktop cloud based on voi mode ensures the convenience and continuity in college teaching, and gradually realizes the effective integration of convenient maintenance and management and data. The operating system of the user teacher machine presents characteristics of personalization and multi-performance, so as to further realize the centralized management of teaching system operation and maintenance.

(3)For desktop cloud, it is an application form of cloud design, which is the result of the continuous development and promotion of the cloud computing technology and big data technology. To ensure that the technology is further improved.

Intelligent teaching, the convenient operation and the maintenance and green environment have gradually become the construction objectives of then improving the traditional teaching environment and building a new teaching model. The application of desktop cloud based on voi mode ensures the convenience and continuity in college teaching, and gradually realizes the effective integration of convenient maintenance and management and data. The operating system of the user teacher machine also presents the characteristics of the personalization and multi-performance, so as to realize the centralized management of teaching system operation and maintenance.

2.2 The Online Virtual Interactive Platform

In the cloud platform, the monitoring and management function is mainly to monitor the computing cluster, virtual machine, storage, computing server, switch, etc.

The monitoring information mainly covers the average CPU occupancy, virtual machine CPU allocation, average storage occupancy, storage resource allocation, the average memory occupancy, number of failed servers, virtual memory allocation, etc. Secondly, virtual machine monitoring mainly covers virtual machine CPU occupancy, disk read and write times, memory occupancy, network inflow and outflow, etc.

Because virtual machines often process large-scale data and have a large load, it is necessary to convert data at any time. The purpose of conversion is to improve the work efficiency of servers. Physical servers can be converted into virtual servers, and virtual servers can be converted into virtual servers. Due to the continuity of virtual machine work, the virtual machine can run and work normally even during the transition. Node/link joint mapping refers to considering the resource requirements and physical resource constraints of virtual nodes and links at the same time when performing virtual network mapping, so as to avoid the occurrence of successful virtual node mapping but the virtual link is affected by the location of the mapped node or link capacity, etc.

The case where the mapping fails due to factor constraints. Generally, the optimization problem of the joint mapping is solved by the method of relaxing integer programming. However, due to the high complexity of the solution, the real-time performance of the joint mapping method of nodes/links in practical applications is difficult to guarantee. Virtual machines and virtual machines are connected through tunnel technology. Tunnel runs on the actual physical network. The bottom layer is the physical network connection. The actual business is carried on the physical network through tunnel. When the virtual machine is migrated, there is no need to make any modification to the physical network.

All changes occur in the software. Through the software to define the network, the general automatic deployment and management of business can be further realized. The storage virtualization gateway device is adopted to solve the problem of data synchronization and simultaneous reading and writing of two storage devices [28]. The two virtualized gateways are in cluster mode, one set fails, and the other set can take over automatically without user perception.

2.3 The Cold Chain

The smart education ecology is not airborne, it is an inevitable state of social and educational development to a certain period. From a practical point of view, the so-called smart education ecology currently being then constructed by schools and regions is considered by the author to be a smart education ecology. The 5G + smart technology is a necessary prerequisite for realizing a new education ecology. It can not only re-enable smart technologies, such as VR, AR, HD live broadcast, etc., but also interconnect these smart technologies to help the big data platform in the smart education ecosystem. build and run. We should regard the construction of the ecological environment as the main body of learning, fully consider the people-oriented and ecological development

of learning, and fully respect the ecological development of the students, so as to realize the ecological value of learning, Raise the people-oriented concept to the general work action consciousness in the teaching management and teaching implementation of intelligent learning education, promote the better implementation of the fundamental task of building morality and cultivating people, and reflect the core essence of intelligent education and cultivating people. As the initiators and implementers of teaching activities, teachers' information technology literacy directly affects the effectiveness of the information-based teaching. Teachers should actively adapt to the development requirements of the era of smart education, and actively focus on information knowledge, information technology, information ability, and information emotion. Change the concept, establish the concept of information technology literacy, change the traditional teaching methods and means, take information teaching as the entry point and breakthrough point of teaching reform, expand the classroom teaching mode through information technology, and turn teaching activities into bilateral activities that students actively participate in.

3. CONCLUSIONS

Application of the computer multimedia-assisted online virtual interactive platform in the smart college education is studied in the paper. This paper studies the construction method of database based on the general native distributed architecture, and constructs the native distributed architecture database. The database has the good performance and has achieved some research results. With the further discussions, the novel multimedia consideration is considered to integrate the general issues. Through the expeirment, the performance is tested and in our future study, the theoreies will be improved.

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5. REFERENCES

[1]Yufeng, C. H. E. N., Zhengtao Xiang, Dengliang Cheng, and X. I. E. Jieren. "A Study on Information Multimedia Integrated Introductory Course of Internet of Vehicles to Students' Self-Efficacy and Learning Effect." Revista de Cercetare si Interventie Sociala 64 (2019): 223-234.

[2]Irudayasamy, Julius, Sani Yantandu Uba, and Carmel Antonette Hankins. "Exploration and Exploitation of Mobile Apps for English Language Teaching: A Critical Review." English Language Teaching 14, no. 4 (2021): 43-54.

[3]Sun, Hua. "Application of the Whole Language Teaching Method in the Teaching of English Vocabulary Based on the Multimedia Environment of the Internet of Things." Frontiers in Educational Research 5, no. 4 (2022).

[4]Cho, Hyeyoung. "Students' Perceptions of Emergency Online Language Education During COVID-19 Pandemic: A Case Study." Multimedia-Assisted Language Learning 24, no. 2 (2021): 10-33.

[5]Gu, Chao, Jiangjie Chen, Chun Yang, Wei Wei, Qianling Jiang, Liao Jiang, Qiuhong Wu, Shu-Yuan Lin, and Yunshuo Yang. "Effects of AR Picture Books on German Teaching in Universities." Journal of Intelligence 10, no. 1 (2022): 13.

[6]Jung, Hee-jung. "Augmented Reality: Exploring EFL Learners' Switching Behaviors with Push-Pull-Mooring Framework." Multimedia-Assisted Language Learning 23, no. 4 (2020): 45-71.

[7]Feng, Ruiling, Xiuhong Shi, Songlian Hu, and Yong Yu. "Feedback and uptake in videoconferences for online intercultural exchange." Journal of Virtual Exchange 4 (2021): 28-46.

[8]Shen, Feifan, Lingjian Ye, Xiushui Ma, and Weihong Zhong. "Flipped classroom based on Internet plus education and smart learning." In Proceedings of the 2018 2nd International Conference on Education, Economics and Management Research (ICEEMR 2018), vol. 182, pp. 74-77. 2018.

[9]Yu, Zixun, and Yu Fang. "The Reformation of College English Teaching under the Background of Smart Education." International Journal of New Developments in Education 4, no. 1 (2022).

[10]Sukare, Nikita. "Smart Classroom Environment using IoT in advanced and lebanese French university Education." Turkish Journal of Computer and Mathematics Education (TURCOMAT) 12, no. 7 (2021): 2185-2191.

[11]Shu, Yang. "Experimental data analysis of college English teaching based on computer multimedia technology." Computer-Aided Design and Applications 17, no. 2 (2020): 46-56.

[12]Aydin, Selami. "Technology and foreign language anxiety: Implications for practice and future research." Journal of Language and Linguistic Studies 14, no. 2 (2018): 193-211.

[13]Hou, Yi-Jun, Sih-Ying Zeng, Chung-Chih Lin, Ching-Tzu Yang, Huei-Ling Huang, Min-Chi Chen, Hsiu-Hsin Tsai, Jersey Liang, and Yea-Ing L. Shyu. "Smart clothes-assisted home-nursing care program for family caregivers of older persons with dementia and hip fracture: a mixed-methods study." BMC geriatrics 22, no. 1 (2022): 1-10.

[14]Chi, Yang, Yue Qin, Rui Song, and Hao Xu. "Knowledge graph in smart education: A case study of entrepreneurship scientific publication management." Sustainability 10, no. 4 (2018): 995.

[15]Zhang, Ronggen. "A Study of the Cultivation of College Students' Learner Autonomy in the Multimedia Environment." Advances in Educational Technology and Psychology 5, no. 7 (2021): 1-12.

[16]Barfi, Kwaku Anhwere, Brandford Bervell, and Valentina Arkorful. "Integration of social media for smart pedagogy: initial perceptions of senior high school students in Ghana." Education and Information Technologies 26, no. 3 (2021): 3033-3055.

[17]Fu, Dan, Leqiu Chen, and Zhou Cheng. "Integration of Wearable Smart Devices and Internet of Things Technology into Public Physical Education." Mobile Information Systems 2021 (2021).

[18]Li, Wei. "College English Paradigm in the Ubiquitous Learning Era: A Literature Review." In 2021 International Conference on Intelligent Transportation, Big Data & Smart City (ICITBS), pp. 784-786. IEEE, 2021.

[19]Yu, Haojie, and Shah Nazir. "Role of 5G and Artificial Intelligence for Research and Transformation of English Situational Teaching in Higher Studies." Mobile Information Systems 2021 (2021).

[20]Jerald Nirmal Kumar, S., K. Anandhan, N. Suresh Kumar, and D. Damodharan. "Smart Education Using Mobile Green Cloud Enabled Platform and Services." In Green Computing in Smart Cities: Simulation and Techniques, pp. 125-149. Springer, Cham, 2021.

[21]Xu, Shuyan, Xiang Li, and Xianhua Yang. "Multilateral interactive teaching model for improving foreign language learners' autonomous learning ability by using multimedia network technology." The International Journal of Electrical Engineering & Education (2021): 0020720920986077.

[22]Cui, Niu. "Development of an Intelligent Foreign Language Multimedia Teaching System Based on the "New Liberal Arts" Paradigm." In International Conference on Application of Intelligent Systems in Multi-modal Information Analytics, pp. 86-91. Springer, Cham, 2019.

[23]Lin, Han-Hong, Yi-Ping Hung, Shih-Han Weng, Pei-Yi Lee, and Wei-Zen Sun. "Effects of parent-based social media and moderate exercise on the adherence and pulmonary functions among asthmatic children." The Kaohsiung journal of medical sciences 36, no. 1 (2020): 62-70.

[24]Suryanti, Suryanti, Wahono Widodo, and Yoyok Yermiandhoko. "Gadget-Based Interactive Multimedia on Socio-Scientific Issues to Improve Elementary Students' Science Literacy." (2021): 56-69.

[25]Costley, Jamie, Mik Fanguy, Chris Lange, and Matthew Baldwin. "The effects of video lecture viewing strategies on cognitive load." Journal of Computing in Higher Education 33, no. 1 (2021): 19-38.

[26]Li, Wang. "Research on the Application of Modern Computer Technology in the Modeling of Basketball Offensive Line Measurement and Calculation." In Journal of Physics: Conference Series, vol. 1952, no. 4, p. 042082. IOP Publishing, 2021.

[27]Hafour, Marwa F. "The effects of MALL training on preservice and in-service EFL teachers' perceptions and use of mobile technology." ReCALL (2022): 1-17.

[28]Rizki, Yunia, and Murniaty Simorangkir. "The influence of virtual chemistry laboratory media on students' understanding of submicroscopic level and student activity grade XI." In 3rd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2018), pp. 520-524. Atlantis Press, 2018.

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Research on Relation Between Reinforced Concrete Frame Structure and Materials

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Abstract: Based on the perspective of seismic performance, this paper conducts research on the design of reinforced concrete frame structures and proposes to quantify the performance level of reinforced concrete frame structures, based on the structural concept, design principles and design strategies of reinforced concrete frames. Reinforced concrete frame beams, slabs, columns and joint reinforcement methods, and designed a set of low-cycle repeated tests of frame joints under horizontal loads to study the shear performance of reinforced concrete frame joints strengthened by new materials, and passed Numerical analysis program was used to simulate and analyze the test, and preliminarily studied the mechanical performance of this new type of material used in the reinforcement of reinforced concrete frame structures.

Keywords: Reinforced Concrete ; Frame Structure; Material

1. INTRODUCTION

J Under the social background of the rapid development of modern architecture in my country, industrial buildings and civil buildings have begun to strengthen the use of reinforced concrete frame structures, making them one of the most used structural forms in building construction. The components of the reinforced concrete frame structure are mainly beams and columns. The structure is simple and clear, the force is clear, it has high strength and ductility, and it has excellent earthquake resistance.

In my country's earthquake-prone areas, reinforced concrete frame structures have become the key structures of buildings. The structural damage process is divided into overall structural collapse and continuous structural collapse. Due to the low probability of structural overall collapse, literature established a damage model through the damage index at the material level and used this damage model to gradually evaluate the damage of local components and even adjacent components. failure, and finally judge the damage of the continuous collapse of the entire structural system. However, literature only simulated and analyzed the damage at the component level, and the feasibility and applicability of using the damage model proposed in this paper to evaluate the overall structural damage still needs to be further improved and verified.

All data in the Revit model are interrelated and dependent on each other. There are two model forms under the structural database: the analysis model and the family instance model. The analysis model is obtained based on the family instance model. Structural analysis data. In view of the stress characteristics of the joints and the severity of joint damage, it is necessary to carry out seismic reinforcement for the frame joints with insufficient bearing capacity, especially the joints of the frame buildings in the earthquake zone. The frame joints damaged in the earthquake also need to be reliably reinforced before they can continue to be used. At present, the reinforcement methods of reinforced concrete frame structures mainly include enlarging section reinforcement method, pasting fiber composite material reinforcement method, pasting steel plate reinforcement method and so on.

The reinforcement method of pasting fiber composite materials and the method of pasting steel plates are currently the most popular reinforcement methods. In my country's building seismic design codes, the goal of building anti-seismic fortification is clearly stipulated, which can be simply summarized as "small earthquakes are not damaged, moderate the earthquake can be repaired, and the earthquake will not collapse" 12 words. According to this building fortification goal, the building structure has a single function, that is, in the event of a rare earthquake, the building cannot collapse, but it cannot effectively control the losses caused by strong earthquakes, such as personal casualties and economic losses. Since most of the earthquakes are random periodic loads, steel bars are prone to fatigue damage under this load. Therefore, it is not appropriate to use the yield, hardening, softening and failure states under monotonic loads to describe the damage of steel bars.

2. THE PROPOSED METHODOLOGY

2.1 Relation between Properties and Materials of Reinforced Concrete Building Structures

The results of the literature show that the damage of building structure steel under alternating seismic loads belongs to high-strain low-cycle fatigue. Therefore, this paper uses the low-cycle fatigue and strength degradation damage theory proposed in literature to evaluate the damage of steel fibers. The basic way to generate a three-dimensional solid model in revit is to finally generate a solid model from points and lines to surfaces. Since the solid model the amount of information is complex, and the extraction of nodes is relatively cumbersome, while the analysis model is the component layout, component positioning and topological relationship generated inside the family instance model, and the data composition form is relatively simple.

Obtain the coordinates of the endpoints through the GetPoint() method and the GetCurve() method and delete duplicate nodes to get all the node information of the model. Only extracting node information is incomplete for the data required for structural analysis. The necessary information for structural analysis is stored in the instance model, and the section,

member length and other information in it can be obtained through the get_Parameter() method. Finally, the geometric information in the Revit model is composed of two parts of information in the family instance model and the analysis model. The method of enlarging section reinforcement is the most traditional reinforcement method, which has a reliable effect on improving the bearing capacity of components.

In recent years, with the widespread application of chemical reinforcement technology, this reinforcement method can better solve the problem of structural connection of reinforced structures, especially for reinforced concrete frame joints, where column-beam reinforcement is anchored by passing through the floor slab or by planting reinforcement on the beam-column. It can ensure joint performance and structural force transmission and is especially suitable for seismic reinforcement of reinforced concrete structures. However, the method of enlarging the cross-section often causes the cross-section of the component to increase significantly, which affects the normal use of the house, and requires concrete vibration and maintenance. The wet work on site is heavy and the maintenance period is long, so the on-site construction is not popular.

This is the biggest difference between performance-based seismic fortification objectives and traditional seismic fortification objectives. Through relevant practical research and investigation, it is shown that the interstudy displacement angle can truly show the comprehensive level of structural deformation of each level of the reinforced concrete frame structure and the impact on the height of the story and has a certain correlation with the level of the damaged structure. Therefore, the level of frame structural members can be quantified through the story displacement angle. Reinforcement materials are self-flowing, self-dense, vibration-free, and fast-setting. On-site, it is only necessary to bind steel bars and erect formwork according to needs, and pour the reinforcement materials, and the surface treatment of the original structure is not highly required. The construction and maintenance period of the new material is shorter than that of the traditional enlarged section concrete (pumping and pouring, vibration-free self-tight chamber, 7d to reach the design strength). To study the performance of reinforced concrete frame structures strengthened by new materials, this paper studies the shear performance of reinforced concrete frame joints strengthened by new materials through experiments and theoretical analysis.

2.2 The Importance of Materials in Reinforced Concrete Frame Structures

Therefore, this paper designs a group of low-cycle repeated loading tests of reinforced concrete frame joints to simulate the damage to the frame joints caused by earthquakes. "Strong column weak beam" is a design principle that can meet the requirements of seismic fortification. Under the influence of large earthquakes, the beam-column joints are the most vulnerable key parts of the frame structure. According to research on earthquakes at home and abroad, when an earthquake occurs, the damage to the building structure is mainly manifested on the columns, that is, the concrete at the end of the column is easily stripped and crushed, and the steel bars are buckled and finally distorted. For the entire reinforced concrete, it is very unfavorable for the frame structure.

The overall damage index curves of structures under different intensities of earthquakes obtained by IDA can be seen from Figure 5. When the PGA is less than 0.4g, the curve is almost linear, and the damage index increases slowly; when the PGA reaches 0.4g, the damage index growth begins becomes faster, indicating that the structure has not yet reached the yield point; when the PGA exceeds 0.4g, the damage index increases rapidly, especially when the PGA is greater than 0.6g, the damage index increases sharply until it is destroyed. The main reinforcement in the beam may be truncated, so the reinforcement information of the left and right sections may be different. To simplify the analysis and reduce the number of elements, the maximum value of all reinforcements near the cross-section at both ends is taken, and the total area of this cross-section point, and all reinforcements is summed and output to obtain the reinforcement of the beam.

Obtain the beam location line and the reinforcement location line through the GetCurve() method. Here, all the reinforcement bars whose reinforcement location line is parallel to the beam location line are screened, and then the distance between the two points of the reinforcement location line and the two ends of the beam location line is judged. If the distance between the two ends of the reinforcement bar is two If the minimum value of the end point distance is less than half of the beam length, the steel bar is located on the other side of the beam. To facilitate the observation of the test phenomenon and the analysis of the test results, the test in this paper uses a plane cross-shaped frame node, and the test frame shown is used to provide the boundary conditions that the lower end of the column is hinged, the upper end is free, and the beam end struts are constrained. The column top uses the reaction force frame and hydraulic jack to provide axial force, and the Schenck machine is used to push the test frame to provide horizontal load on the column top. The test conditions are like the boundary conditions and stress conditions of the nodes under earthquake action.

If the building’s structural design and resource allocation permit, the cross-sectional size of the column can be made as large as possible to ensure that the ratio of the linear stiffness of the column to the linear stiffness of the beam is greater than 1. At the same time, the axial pressure of the column is strictly controlled to ensure meet the design standards and requirements of the building in terms of seismic performance and enhance its ductility. When checking and calculating the bearing capacity of the section, the design bending moment of the column is artificially adjusted and adjusted and enlarged according to the principle of "strong column and weak beam", so that the reinforcement structure of the column is strengthened. In addition, the longitudinal tensile reinforcement at the beam end should not be too large, to avoid the rapid yield stage during an earthquake and the failure to form plastic hinges, which will pose a threat to people's personal safety.

The use of new concrete materials to strengthen reinforced concrete frame joints can effectively increase the joint shear capacity. The method adopted by J2 to reduce the workload of planting bars is feasible to improve the joint shear capacity by no less than the common practice of J1. However, the analysis is based on the results of computer numerical simulation, which needs to be verified by actual experiments. The section size of the components used in the analysis, the stress of the joints, the reinforcement status, the reinforcement thickness, and the reinforcement effect are all individual, what is done is only qualitative research, and the reinforcement effect of the method in this paper should be quantitatively analyzed for the nodes in different situations , still need to conduct many experiments for statistics.

3. CONCLUSION

In the face of people's ever-increasing demands for a better life, the development of my country's construction industry needs to adapt to people's residential and use needs, especially for areas with high earthquake incidence. The safety and stability of structural design and meeting the seismic performance are the primary principles of design. Therefore, in the process of designing a reinforced concrete frame structure, on the one hand, it is necessary to carry out corresponding calculations for the structure in accordance with the current design codes in my country. Through the intra-layer pumping and pouring technology, the shortcomings of the traditional enlarged section method can be effectively solved, and the frame joints can be realized. Quick and effective reinforcement. This method is applicable to both seismically damaged structures and ordinary structures and can be studied and applied as a new method system for structural reinforcement.

4. REFERENCES

[1] Yang Xiaowei and Wang Haomin. Research on Seismic Performance and CO2 Emission of Reinforced Concrete Frame Structure and Frame Thin Shell Structure [J]. Concrete and Cement Products, 2021, 000(011):68-72.

[2] Hu Kexu, Liu Chunhao, Li Xiang, et al. Preliminary Study on the Performance of Reinforced Concrete Frame Structures Strengthened with New Materials [J]. Engineering Seismic Reinforcement and Retrofit, 2009, 31(6):5.

[3] Mu Peipei. Construction Quality Control of Reinforced Concrete Building Frame Structure[C]// "Decision Forum - Regional Development and Public Policy Research Symposium" Proceedings (Part 2). 0.

[4] Ma Hongwang, Lu Xilin. Research on the approximate relationship between the cost and failure probability of reinforced concrete frame structures [J]. Earthquake Engineering and Engineering Vibration, 2003, 23(3):7.

[5] Dong Guiyan. Research and Application of EPS Modular Reinforced Concrete Frame Structure [D]. Jilin Jianzhu University, 2015.

[6] Yang Zhuoxing. Seismic Regulations and Performance Comparison of Reinforced Concrete Frame Structures in High Seismic Risk Areas of China and the United States [D]. Chongqing University, 2010.

[7] Tan Hailiang, Cui Guyue, Guo Xu, et al. Application of BIM-based inspection and evaluation system in reinforced concrete frame structures [J]. Building Science, 2017, 33(9):6.

[8] LIU bo-quan, LIU Boquan, FU Guo, et al. Research on the collapse and failure of reinforced concrete frame structures under large earthquakes I: Domain collapse and failure[C]// 2016.

[9] Yang Fan, Long Yuhang, Wei Guohua. Research on Revit-ABAQUS Reinforced Concrete Frame Shear Wall Structural Model Conversion[J]. Value Engineering, 2022(024):041.

[10] Fan Yangning. Analysis on Construction Technology of Reinforced Concrete Frame Structure of High-Rise Buildings [J]. Modern Property: Mid-day Journal, 2019(2):1.

[11] Zhu Yueping. Research on Safety Assessment Method of Concrete Frame Structure Based on Extenics [D]. Shenyang Jianzhu University, 2011.

[12] Zhao Yonghong, Jiang Li, Zheng Keting, et al. A Modular Design Method and System for Car Body: CN115701608A[P]. 2023.

[13] Xie Mengxue. Strategies to improve the progressive collapse resistance of frame structures[J]. Shandong Industrial Technology, 2013(7):14-15.

[14] Yu Xiaohui. Probabilistic earthquake vulnerability and risk analysis of reinforced concrete frame structures[D]. Harbin Institute of Technology.

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Innovative Analysis of the Integration of Chinese Language and Literature into Ideological and Political Education in Colleges and Universities

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Abstract: Under the guidance of "cultivating morality and cultivating people" in the center of higher education, all major colleges and universities across the country are actively promoting classroom teaching reforms with the goal of "curriculum ideology and politics", which is also very important in the language course teaching of Chinese language and literature majors. Regardless of the nature of language itself, the current situation of language course teaching, or the perspective of foreign cultural communication in the new era, in these four dimensions, mechanism is the foundation, curriculum is the starting point, teachers are the key, and evaluation is the means. Only when these four dimensions work together and go in the same direction, can we continuously enrich the practical content of the "curriculum ideology and politics" of the Chinese language and literature major, and continuously enrich the realization ways of the "curriculum ideology and politics" of the Chinese language and literature major.

Keywords: Chinese Language and Literature; Ideological and Political Education; Innovative Analysis

1. INTRODUCTION

With the continuous deepening of curriculum ideological and political concepts and the introduction of related educational reform measures, the professional education of Chinese language and literature has ushered in the opportunity of innovation and development. Under the guidance of the ideological and political concept of the course, research on the teaching of Chinese language and literature can guide the teachers of Chinese language and literature to establish the ideas of "curriculum carrying ideological and political" and "ideological and political integration into the curriculum", and integrate the content of educating people into the classroom teaching of Chinese language and literature , forming and implementing a teaching design that integrates the teaching of Chinese language and literature with ideological and political education, and realizes the goal of cultivating Chinese language and literature talents with both ability and political integrity. With an unprecedented trend of positive advancement, teaching research and reform of many professional courses are in full swing under the concept of "Curriculum Ideology and Politics".

Language courses in colleges and universities, such as modern Chinese and ancient Chinese courses for Chinese language and literature majors, also need to be actively followed up to enter the tide of ideological and political construction of courses. The inherent characteristics of the Chinese language and literature major make the Chinese language and literature major have the inherent advantages and unique conditions to carry out the "course ideological and political". The goal of literature education and ideological and political education is highly consistent, both of which are to cultivate people with all-round development. Literary education has the characteristics of sensibility, kindness, invisibility, and silence. These characteristics provide unique conditions for Chinese language and literature majors to carry out "curriculum ideology and politics". In the process of practicing and promoting "curriculum ideology and politics", Chinese language and literature majors should attach great importance to the four important dimensions of operating mechanism, curriculum construction, teacher training, and evaluation system to improve the quality of Chinese language talent training.

The book pointed out that the current combination of professional courses and ideological and political education is still facing certain difficulties: the integration of ideological and political education elements into Chinese language and literature courses is not high enough to ensure that the teaching work cannot be improved in time; The level of excavation of ideological and political elements is not high, and some subjects have low awareness of the elements of educating people, failing to create a good quality cultivation ecology. In 1996, the National Education Commission promulgated the "Full-time Ordinary Senior Middle School Chinese Teaching Syllabus" (for experimental use), pointing out that Chinese is the most important communication tool and the most important cultural carrier.

This programmatic document defines the attributes of language, including language. Language is not a general communication tool, but a humanistic communication tool. "The humanism of language is not only manifested in its carrier of culture, but also in the aspects of transportation--dissemination", "instrumental and humanistic are not dualism". The requirements of "course content" in the old curriculum evaluation index system It is "teaching content must be advanced, scientific and systematic, conform to the development of the times, constantly optimize, keep pace with the times, and reflect the latest research results in this discipline in a timely manner", the requirements for "curriculum ideological and political" are not reflected Especially full. To adapt to the requirements of the era of "Curriculum Ideology and Politics", we should introduce ideological and political content into the curriculum

evaluation index system and assign corresponding points according to the principle of "Coursework has Ideology and Politics, and all teachers teach people".

2. THE PROPOSED METHODOLOGY

2.1 The Necessity of Integrating Chinese Teaching into Ideological and Political Education

Schools and Chinese language and literature teachers should actively rely on ideological and political elements when determining the teaching objectives of the curriculum and integrate the moral education objectives and the Chinese language and literature education objectives. That is to say, the goal of Chinese language and literature courses should include not only teaching students professional knowledge, but also cultivating students' comprehensive quality, specifically including literary professional accomplishment, professional ethics, and sense of national responsibility. Only when the curriculum goals are well formulated, can the follow-up teaching work of various courses have rules to follow, and can ensure that the teaching activities are always moving towards the goal of integrating education and talents. Teachers should not only pay attention to the teaching of Chinese knowledge in language courses, but also pay full attention to the teaching of Chinese traditional culture, cultural self-confidence, socialist cultural prosperity, and other value-level knowledge with Chinese as the carrier, and then use it to spread the excellent traditions of the Chinese nation culture.

This will undoubtedly play an important role in establishing youth cultural self-confidence, telling Chinese stories well, demonstrating the country's cultural soft power, and leading the public to consciously participate in the learning and practice of language and culture. Therefore, the integration of language course teaching into ideological and political education, which is characterized by emphasizing the humanism of language teaching and conveying excellent traditional culture, has become an inevitable requirement for foreign cultural exchanges and dissemination in the new era.

The foreign literature course group, while leading students to appreciate the exotic scenery of foreign literature, skillfully uses comparative analysis methods and dialectical analysis methods to guide students to correctly understand and evaluate foreign literary and cultural phenomena, and deeply understand them from the perspective of comparative analysis and dialectical analysis. The value of Chinese traditional culture, so that students can reach a new understanding and new realm of Chinese traditional culture, form a correct world outlook and values, and further stimulate national self-confidence, pride, and patriotism. Make the content design of Chinese language and literature courses and Various ideological and political elements are integrated with each other, so that the teaching content of the course considers both knowledge and ideology, forming a synergistic education effect. For example, teachers can scientifically select classic cases with the characteristics of ideological and political education, integrate them into the unit themes of Chinese language and literature textbooks, literary works, and after-school exercises, and focus on digging out the theoretical knowledge of literature and the educational elements hidden behind literary works , It should be noted that the selection of materials should be natural and appropriate, moisten things silently, avoid "two skins", and avoid excessive excavation that will lead to a decline in the original knowledge imparting level. The root of changing teaching concepts lies in the deepening of teachers' understanding of "curriculum ideology and politics" in theoretical teaching or practical teaching.

2.2 The practical path of integrating Chinese language teaching into ideological and political education

For language teaching, teachers are required to realize that the current "education" cannot be achieved only by ideological and political courses but can only be completed with the participation of all other professional courses; students must be guided to learn the helpful teachings contained in professional courses. Knowledge elements that form correct values and ideals and beliefs; look at "course ideology and politics" with a long-term and developmental perspective, fully understand the consistency between the connotation of professional curriculum education and the pulse of the development of the times, and guide and inspire students in today's world. Correct values are formed in various ideological and cultural exchanges. Teachers are the first resource for educational development, and educating people begins with educating teachers. General Secretary Xi Jinping pointed out that "the evangelists themselves must first understand the way and believe in it. University teachers must insist that educators should be educated first."

Teachers are the main force and direct subject of carrying out "Curriculum Ideology and Politics". Can teachers be unique, timely discover and effectively excavate the ideological and political elements in the professional courses they undertake, and can they be handy, appropriate, and capable in the teaching of professional courses? The infiltration and integration of ideological and political elements in the school depends on the teacher's political stance, ideological understanding, professional level, and professional skills. The Chinese language and literature course should enhance students' personal experience of various moral cultivation elements, focus on reforming the three-teaching links of theoretical teaching, case teaching, and practical training, and use more advanced teaching methods to promote students' understanding of the content of ideological leadership. On the one hand, teachers of Chinese language and literature should pay attention to the diversification of teaching methods. Using multimedia teaching, interactive teaching, and inquiry-based teaching, students have more opportunities to experience ideological and political elements. For example, students are required to master and understand the latest basic theories of literature and the basic knowledge they need and set up study groups outside of class to complete integration. Homework with ideological and political elements.

At the same time, considering students' own Chinese learning experience and knowledge reserves, supplementary reading materials, introductions to selected works of classics, etc. are added to break through the traditional writing framework of ancient Chinese textbooks that often include anthologies, general theories, and commonly used words. In short, the basic purpose of these construction measures starting from the concept of teaching material compilation, teaching material structure system and teaching material content system is to improve the compilation of teaching materials, improve the quality of teaching materials, and better develop the excellent traditional Chinese culture for teachers while imparting professional knowledge. Education provides good teaching material support. Evaluate the teaching content and teaching process of "Course Ideology and Politics". Specifically evaluate whether the teaching content of the course reflects the requirements of "course ideological and political",

whether it can achieve the organic combination of imparting professional knowledge, cultivating professional ability, and integrating ideological and political elements.

Evaluate whether the teaching process of the course achieves the organic combination of professional knowledge and ideological and political education, whether the ideological and political content is organically integrated into classroom teaching, and whether the above-mentioned "professional knowledge imparting, professional ability cultivation, and ideological and political elements integration" are achieved. The three-dimensional goal of "organic combination".

On the other hand, teachers of Chinese language and literature courses need to pay attention to emotional education and realize the integration of emotion and reason in course teaching. Specific measures include leading students to the Red Culture Memorial Hall to carry out on-site education, learning red literature, understanding red culture, inheriting red genes, promoting students to feel the red spirit, and achieving the purpose of emotional education. Teaching evaluation is an important part of teaching activities. Under the ideological and political concept of the course, students' Chinese learning should not only gain language knowledge, but also realize the cultivation of their own moral sentiments and the improvement of their spiritual cultivation. Therefore, corresponding to the optimization of teaching content and the improvement of teaching methods are the comprehensiveness of assessment content, the diversification of evaluation methods, and the multi-perspective of evaluation subjects.

3. CONCLUSION

To sum up, the ideological and political construction of the Chinese language and literature major is a systematic curriculum reform work. Schools and teachers should consciously broaden the horizons of education and work together to promote the renewal and improvement of the Chinese language and literature course content and teaching environment. The ideal teaching effect will be greatly reduced. The research and practice of the vivid method of ideological and political courses in colleges and universities will be accompanied by the education and teaching of ideological and political courses in colleges and universities. Taking General Secretary Xi Jinping's exposition of the history of the Communist Party of China as the material and analyzing his perspective and method of telling the history of the Communist Party of China, it will surely provide useful practical inspiration for the education and teaching methods of ideological and political courses in colleges and universities in the new era.

4. REFERENCES

[1] Feng Li, Feng Chao. Research on the strategy of ideological and political penetration in Chinese language and literature teaching courses.

[2] Deng Xiaojun. Analysis on the Path of Ideological and Political Practice of Ancient Chinese Literary Theory Course.

[3] Wang Dan, Liu Gang, Deng Jian. Goals, ideas, and approaches for the construction of provincial-level first-class undergraduate majors——Exploration on the teaching reform of Chinese language and literature majors in Guangdong Ocean University [J]. Journal of Mudanjiang Institute of Education, 2022(6): 31-35.

[4] Ren Dong. Promoting the Quality Improvement of Chinese Language and Literature Majors with Curriculum Ideology and Politics [J]. Literature Education, 2019(35): 2.

[5] Li Yanting. Research on Ideological and Political Design of Modern Chinese Courses in Colleges and Universities [J]. Journal of Jilin Radio and TV University, 2022(2):3.

[6] Qin Mi. Ideological and Political Implementation Strategies for the "Interpretation of Famous Chinese Textbooks for Secondary Schools" Course in Colleges and Universities——Taking the Chinese Language and Literature Major of the School of Literature and Media of Hechi University as an Example [J]. Journal of Hechi University, 2021, 41(1): 92-100.

[7] Sun Yanhua. Effective integration of curriculum ideology and politics in Chinese language and literature education [J]. 2020.

[8] Xue Cheng. Exploration of the Ideological and Political Teaching Mode of Chinese Language and Literature Majors in Local Universities [J]. Journal of Kaifeng Vocational College of Culture and Art, 2021, 41(10):3.

[9] Yang Dongxiao. Research on the Reform of "Comparative Literature" for Chinese Language and Literature Majors in Colleges and Universities under the Ideological and Political Teaching Mode of Courses [J]. Chinese and Foreign Exchange, 2020, 027(005): 17.

[10] Wu Hongsong. The Exploration and Practice of the "Course Ideology and Politics" Construction of Linguistics in Colleges and Universities——Taking the Language Course Teaching of Chinese Language and Literature as an Example [J]. Journal of Anhui Agricultural University: Social Science Edition, 2020, 29(6): 5.

[11] Wang Xiaoming. Analysis on Ideological and Political Construction of Chinese Language and Literature Major [J]. Middle School Politics Teaching Reference, 2022(8):1.

[12] Gao Rihui. The Connotation and Construction System of Ideological and Political Majors in Ordinary Universities——Taking Chinese Language and Literature as an Example [J]. Journal of Dalian University, 2022, 43(2):58-64.

[13] Yang Changjun. Teaching Exploration of "Course Ideology and Politics" in Bingtuan Radio and Television University——Taking the Chinese Culture Overview Course for Undergraduate Majors in Chinese Language and Literature as an Example [J]. Journal of Kaifeng Vocational College of Culture and Art, 2020, 40(3):2 .

[14] Xiao Yongfeng. Ideological and Political Exploration of Ancient Chinese Courses for Chinese Language and Literature Majors in Normal Universities [J]. Journal of Liupanshui Normal University, 2021, 33(2):6.

[15] Hou Lixia. Promoting the Quality Improvement of Chinese Language and Literature Professional Talent Training with Curriculum Ideology and Politics [J]. Shan Hai Jing: Frontiers of Education, 2021, 000(025):P.1-1.

[16] Zhang Guangcai and Deng Shaomin. Four Dimensions of "Course Ideology and Politics" Education in Chinese Language and Literature Majors in Local Undergraduate Universities [J]. Journal of Changji University, 2021, 000(004):86-90.

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Intelligent Software for Multi-Ethnic Spectrum-Assisted Vocal Music Teaching Based on Intelligent Audio Classification Algorithm

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Abstract:Aiming at the currently used parameters are mainly static features, a dynamic feature calculation method based on information theory is proposed, and the initial value in key frame extraction is set according to its physical meaning, and the A algorithm is used to decompose the tensor, and then a tensor-based model is proposed. classifier. The experimental results show that the characteristics of the tensor model have a certain improvement effect on the problem of violent audio classification. National vocal music is the concentrated expression form of the Chinese national characteristic culture, showing many characteristics and potentials. Recognizing the strengths and weaknesses of each other's culture establishes a theoretical foundation, finds a new theoretical fulcrum for re-evaluating the value of different music cultures fairly and reasonably, and provides the necessary international quality for cultivating talents in the new century.

Keywords: Intelligent Software, Multi-Ethnic Spectrum, Vocal Music Teaching, Intelligent Audio Classification Algorithm

1. INTRODUCTION

With the widespread application of multimedia and Internet technologies, there is an increasing demand for efficient audio data retrieval [1]. Audio classification is an important method to extract structured information and semantic content in audio, and it is the basis of audio understanding, analysis and retrieval. Audio classification mainly includes two basic aspects: feature extraction and classification [2]. In terms of feature extraction, it has been widely used in artificial intelligence fields such as image recognition, but it is still rarely used in the field of audio sentiment analysis [3].

However, some studies have shown that the VGGish network can extract more comprehensive and complex features of the data, which can lay a good foundation for intelligently analyzing the emotion of audio information [4]. The traditional method is to manually review the audio and video uploaded by the user. Due to the large amount of network multimedia, the manual method will waste a lot of manpower. Therefore, an algorithm is needed that can automatically identify violent content [5]. Audio is an important part of multimedia information. The traditional method is to manually review the audio and video uploaded by users. However, due to the large amount of online multimedia, the manual method will waste a lot of manpower. Therefore, an algorithm is needed that can automatically identify violent content [6].

Audio is an important part of multimedia information. Our country is a multi-ethnic country, and excellent traditional culture has a long history. As a form of China's excellent traditional culture, national vocal music is inheriting and promoting folk songs and rap in various places [7]. With the continuous improvement of the level of education informatization, intelligent teaching has gradually become a trend, and the integration of information technology into vocal music classroom teaching also become inevitable [8]. Based on the premise that the country vigorously promotes the reform policy of music teaching curriculum in primary and secondary schools, this research has very important theoretical and practical significance [9].

Since the formation and promotion of the concept of multiculturalism, the traditional music teaching model has been greatly affected, and has been unable to meet the teaching standards of music courses [10]. The current era is an era in which industrial civilization is turning to post-industrial civilization. The era of modern knowledge-based transformation; the impact of the fourth industrial revolution has had a profound impact on traditional music production methods, teaching methods and learning methods, and the new teacher-student relationship and teaching concepts are facing reconstruction [11].

The oppression of cultural identity by the wave of globalization. In order to allow users to efficiently access the specific segments retrieved, it is necessary to organize the management of audio data and perform appropriate encoding format conversion, and establish an application-oriented, encoding Unified [12], easily searchable audio library. However, the amount of audio data is often very large. When the audio signal changes with time, information changes must occur between frames, so this paper uses information theory to calculate dynamic features [13]. In terms of classification, the vector space model is a classic method in information classification, but in the similarity calculation, only the matching information of the weight vector is considered, and the relevant information between the feature items is ignored [14].

Since most of the features of audio signals are extracted based on frame granularity, for each sample. The extracted original feature is a matrix composed of the feature sequence of the frame [15]. Traditional methods often need to convert matrices into vector features for classification. Compared with other traditional methods, the classification algorithm has higher classification accuracy, faster calculation speed, is more suitable for processing large amounts of data, and is more intelligent, such as electrocardiographic signals [16]. As

a treasure of traditional Chinese music culture, ethnic vocal music is becoming more and more important. more attention. While the teaching of ethnic vocal music in colleges and universities is developing rapidly, there are also many problems. Therefore, in the perspective of multiculturalism, we must carry out targeted teaching reforms to promote better and faster development of ethnic vocal music [17].

The construction of intelligent teaching requires that vocal music teachers in higher vocational schools can make full use of various forms of wisdom to further enrich the teaching content of vocal music courses, and form a new teaching ecology that is more intelligent and more in line with the needs of students, so as to promote the development of students' innovative thinking and improve the vocal music classroom. teaching effectiveness [18]. Since most of the features of audio signals are extracted based on frame granularity, for each sample. The extracted original feature is a matrix composed of the feature sequence of the frame. Traditional methods often need to convert matrices into vector features for classification [19].

2. THE PROPOSED METHODOLOGY

2.1 The MFCC

The audio stream is divided into frames, and each frame signal is calculated to obtain a 13-dimensional feature vector, including 12-dimensional MFCC coefficients and 1-dimensional dynamic features. K-means is used to cluster the feature space, and the initial centroid is selected according to the physical meaning of the audio dynamic features, that is, the entire frame feature vector of the audio is quickly scanned. For a given number of components, from the effect point of view, the alternating least squares (Alternating Least Square) is a relatively efficient algorithm.

A large number of experiments have proved that the ALS algorithm has a good trade-off between the computational cost and the quality of the result, and is easy to implement, guarantees convergence, and is easy to extend to high-order tensors. ANN can process some environmental information that is very complex, the background knowledge is unclear, and the samples have The problem of pattern recognition with large defects or distortion is very suitable for classifying radar signals, but due to its long training time and poor real-time performance. The design idea is realized. It provides a high-throughput, scalable, and scalable distributed file system. It can be quickly deployed on cheap servers. It is a highly fault-tolerant distributed system. It relies on the redundancy mechanism between nodes to perform data backup and recovery and provides high-throughput data storage functions. It is suitable as the storage basis for massive data. In VSM, the TFIDF formula is used to calculate the weight of keywords, that is, the product of word frequency and inverse document frequency.

In the audio frame vector sequence, the frame frequency cannot completely and accurately measure the influence of the key frame. When the number of clustered frames in which the key frame is located, that is, the greater the frequency, the greater the effect of the key frame on distinguishing audio. Considering the large amount of data and it is not meaningful to retain the characteristics of each frame, here The eigenvectors of adjacent frames are averaged, so that the obtained eigenmatrix can more accurately express timing information and is more meaningful. In the actual transmission of the signal, the number of training samples obtained is very limited. At this time, it is difficult for many methods to achieve the ideal classification effect. Even in the case of limited training samples, the use of a complex learning machine can make the learning error smaller, but generalization feature is often worse.

2.2 The Multi-Ethnic Spectrum Assists Vocal Music Teaching

My country has a vast territory, and under the colorful natural environment and cultural style, the vocal art of various regions presents the characteristics of distinct personality and multi-layered diversity, and the singing methods of each ethnic group have certain differences. Therefore, the content of ethnic vocal music teaching Also involved in a wider range. In the current vocal music teaching work, teachers must rely on rich and diverse digital teaching resources to carry out intelligent reform of teaching methods. However, from the survey of the current degree of digitization of vocal music teaching resources, it is found that there are only less than 40% of the existing resources. At the same time as the development of global integration is gradually deepening.

In a modern society, China must constantly make changes, so as to better cater to the changes in the world's cultural situation. The driving force for the development of popular music lies in the commercial operation. Coupled with the influence of various factors, it affects the development and inheritance of traditional folk music culture. The rise of multicultural music education is closely related to the multicultural trend of thought in the world. Although "cultural diversity" as a cultural phenomenon has a long history in human society, "multiculturalism" as a social thought started in the early 20th century. Since the beginning of the new century, due to the proliferation of separatism and populism. Heavy. Calculate the class pattern of a certain type of audio set D in the entire training set, form a feature space of the frame sequence of all audio files of this class, perform clustering to obtain the key frames of this type of audio file, and calculate the frame distribution information as the weight, so we get A class pattern of , which represents this class of audio.

Chinese national vocal music is the rich accumulation and artistic expression of traditional Chinese culture. It is deeply loved by the public for its clear rhythm, beautiful melody and sincere emotion. Diversification has gradually become the main direction of the development of music culture. Teachers should analyze reports in real time according to their learning situation, generate dynamic teaching content, and accurately match high-quality digital resources to students' learning needs, so as to form specific teaching courses. How to organize these materials becomes the problem, and this is where the organization structure of the content arises. Because of the existence of subordination and logical relationship within the subject knowledge itself.

2.3 The National Spectrum Assisted Vocal Teaching Smart Software Design

The correct recognition rate for the three signals is close to 0.99, so the classification algorithm has a good generalization ability and overcomes the problem of excessive dependence on the model. The radial basis kernel function or polynomial kernel function of different parameters has no obvious effect on the performance of the algorithm. Influence. We must open our horizons, not blindly impart various techniques of Western singing to students, but truly achieve mutual reference and communication between the various branches of ethnic singing and Western singing, and create a college

ethnic group that belongs to traditional Chinese culture and art.

The road to teaching vocal music. From the above process of rhythm training and teaching, it can be seen that once rich resources and accurate data analysis tools are available, the diversified application and precise adaptation of existing high-quality teaching forms can be realized in the development of multicultural music teaching. In the process, the daily study life and music teaching should be integrated. While teaching traditional music knowledge, some other music elements should be integrated to enrich the teaching content. Huang Zhen ⑩ expounded on the application of multicultural music. In the history of education development, there are various educational theories, such as humanism, behaviorism, eternalism, progressivism, constructivism, critical theory, etc. There are different philosophical positions behind these theories. Such as the rationalist philosophy behind eternalism, the mechanical materialism behind behaviorism, etc.

There are many classification algorithms for data mining, such as decision tree, regression analysis, Bayesian, neural network, support vector machine, etc. Curriculum setting is the basis and orientation of teaching. To build a perfect Chinese national vocal music teaching system, make the teaching content meet the requirements of Chinese national vocal music teaching reform. Then 10 students independently carried out the corresponding knowledge learning according to the requirements of this module, and participated in the learning of other modules according to the plan, and finally completed a practical teaching exercise for preschool children according to the learning plan.

3. CONCLUSIONS

The improved VSM algorithm proposed in this paper can better obtain the key information in the data. It adopts the sequence of key frames and weights, and preserves the relationship between the audio auditory characteristics. The relevant information of the audio frequency is preserved, the tensor features are constructed, the feature matrix of each sample is projected and dimensioned, and a classification method based on the tensor model is proposed. The most important task of national vocal music teaching is to establish a sound education system to fully reflect the national characteristics. College teachers need to closely link ethnic culture and vocal music teaching, only by accurately grasping the characteristics of students, combining advanced ethnic music teaching ideas and teaching theories, and highlighting the pertinence of teaching.

4. REFERENCES

[1]Zhuo Guangping. Research on Data Mining Development and Application [J]. Software, 2015, 36(5): 81-83

[2] Cheng Chen. Big Data Mining Analysis [J]. Software, 2014, 35(4): 130-131.

[3] Deng Naiyang, Tian Yingjie. A New Method in Data Mining—Support Vector Machines (First Edition) [M]. Science Press, 2004.

[4] Wang Hongtao, Sun Jianwei. Research on Classification Method Based on BP Neural Network and SVM[J].Software, 2015, 36(11): 96-99.

[5] Tang Bin, Hu Guangrui.Classification and Recognition of Radar Signals Based on Immune RBF Network[J]. Data Acquisition and Processing, 2002, 17(4): 371-375.

[6] Ning Yu. Radar Signal Recognition Algorithm Based on Fractal Theory and Neural Network [J]. Small and Medium Enterprise Management and Technology, 2014, (2): 313-314.

[7] Chen Ting, Luo Jingqing. A Radar Signal Recognition Method Based on Neural Network Adjustment of Weights[J]. Modern Defense Technology, 2007, 35(2): 105-108.

[8] Hu Kui, Zhu Chengwen. Radar Signal Classification Based on Support Vector Machine[J]. Statistics and Decision, 2008, (23): 154-156.

[9] Yu Zhibin.Recognition of Radar Radiation Source Signal Based on Intrapulse Features[D]. Southwest Jiaotong University, Chengdu, 2010.

[10] Chen Ruizhong. Research on ECG Signal Processing and Analysis [D]. Guangxi Normal University, Guilin City, 2000.

[11] Liu Chunling, Wang Xu. Classification of ECG Signals Based on Improved Adaptive Wavelet Neural Network [J]. Journal of System Simulation, 2007, 19(14): 3281-3297.

[12] ROBERTO KH,TAKASHI YONEYAMA. A Competitive Wavelet Network for Signal Clustering [J]. IEEE transactions on systems man and cybernetics(S1083-4427), 2004, 34(2): 1282-1288.

[13] Song Li, Meng Qingjian, Zhang Guangyu, et al. Research on automatic classification of ECG signals based on waveform features and SVM [J]. Chinese Journal of Medical Physics, 2010, 27(4): 2043-2046.

[14] Zhao Chuanmin. Research on automatic classification algorithm of ECG signal based on multi-feature selection [D]. Soochow University, Suzhou City, 2012.

[15] Li Zhe. Classification of ECG Signals Based on Sparse Representation and LS_SVM[D]. Hebei University, Baoding, 2015

[16] Yang Xin, Fei Shumin, Chen Lijuan. Signal Multiclass Classification Based on Fuzzy Synthesis and Optimal Wavelet Packet Decomposition[J]. Data Collection and Processing, 2007, 22(4): 458-462.

[17] He Qiang, Huang Sheng, Mao Shiyi, et al. Adaptive periodic wavelet neural network for signal approximation and classification[J]. Signal Processing, 2000, 16(1): 42-45.

Yang Xin, Fei Shumin, Chen Lijuan. Signal Multiclass Classification Algorithm Based on Wavelet Subspace, Support Vector Machine and Fuzzy Integral[J]. Information and Control, 2007, 36(2): 211-217.

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