

Research on Chinese Language Teaching System in Colleges and Universities and the Path of Cultivating Dual Creative Talents

Zhenjing Lin^{a,*}, Jing Chen^b

^aHebei Agricultural University, Qinhuangdao, Hebei, 066000, China

^bHebei University of Environmental Engineering, Qinhuangdao, Hebei, 066102, China

Abstract. The wave of mass entrepreneurship and innovation is on the rise, which is of great significance to the career development of college students. As the most popular specialty in colleges and universities, the development of Chinese language and literature has gained more and more attention on double creation. In this paper, virtual reality technology is used to optimize the traditional Chinese language teaching in colleges and universities in an innovative way, improve the database management and the design of the main teaching modules, and construct a VR-based Chinese language teaching system in colleges and universities. It is applied to the practical teaching of Chinese language in colleges and universities, and explores the cultivation path of Chinese language bicultural talents. By comparing the changes in Chinese language literacy and dual-creation ability of the experimental group and the control group before and after the experiment, the application effect of the Chinese language teaching system in colleges and universities constructed in this paper is explored. The scores of the students in the experimental group before and after the experiment on the 10 dimensions of Chinese language literacy and dual-creative ability have been improved, with the increase ranging from 1.11 to 13.60, of which the largest increase is in organizational management ability and the smallest is in creativity. The significance of all dimensions except creativity is less than 0.05. The significance sig value of the control group on the 10 dimensions is greater than 0.05. The Chinese language teaching system constructed in this paper in colleges and universities has significant effect in improving students' Chinese language literacy and bi-initiative ability, which is obviously better than the traditional Chinese language teaching mode.

1. Introduction

Chinese language teaching is guided by language learning objectives, and basic Chinese language teaching mainly includes language comprehension, expression and writing skills [1]. Language learning is subdivided into two parts: basic and specific. The basic goal is that all the goals of language learning require the mastery of expression skills mainly [2]. Under the different learning objectives of each student,

Corresponding author: Zhenjing Lin, mail address: linzhenjing207@126.com

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Corresponding author.

language learning has a common goal - to master the language and be able to read quickly and accurately, express themselves fluently and write in writing, to be familiar with the language and be able to apply the language skillfully [3-4].

Chinese language and literature majors in colleges and universities have a long history, but it is also a discipline with rich cultural connotations, and plays a positive role in cultivating students' humanities and social sciences literacy [5-6]. At present, with the rapid development of society, the demand for application-oriented high-quality talents is increasing, and Chinese language and literature majors focus on theoretical knowledge teaching, in the traditional talent training mode, many graduates, although they have a solid knowledge of language and literature, but the practical application ability is not optimistic [7]. Today's society needs composite application-oriented talents with solid textual skills and strong business ability in all aspects, which requires Chinese language and literature majors to reform and innovate the traditional talent training mode, integrate innovative elements into the curriculum, teaching practice, etc., and explore new paths suitable for the cultivation of Chinese language and literature majors in the new period [8].

Qiu, L et al. explored the association between Chinese language and personality expression and compared the related studies in English, and found that Chinese personality expression has specificity and universality, and also pointed out that there are differences in the expression of personality between real and imaginary words in different languages [9]. Gong, Y et al. reviewed the related research and literature on Chinese language teaching and pointed out that the focus of the research on Chinese language teaching at home and abroad is obviously different, and there are fewer studies related to transnational Chinese language teaching, and they believe that domestic and international research on Chinese language teaching can be carried out in order to promote the development of Chinese language teaching [10]. Lin, C et al. explored the development of Chinese language teaching and the development of Chinese language teachers' skills, and concluded that a unified standard should be set for Chinese language teaching skills, and the training of Chinese language teachers should be integrated with theoretical teaching, practical training and reflection [11]. Duff, P. A. et al. reviewed the studies related to Chinese language heritage as well as Chinese language heritage education, aiming to uncover the potential barriers faced by language learners in Chinese language learning and Chinese language transmission, and targeting some effective recommendations for improvement [12]. Peng, H et al. attempted to investigate Chinese sentiment analysis based on the monolingual and multilingual perspectives of the Chinese language, involving the collation of sentiment corpus, Chinese sentiment classification, etc., and made an outlook on the future research trend of Chinese sentiment analysis [13]. Huang, C. R et al. revealed the special relevance of Chinese language connotation and language arts, which was discussed in detail through the medium of movies, plays and word games, and also pointed out the contradiction between official and local languages in terms of unity of language arts [14].

This paper introduces virtual reality technology into Chinese language teaching in colleges and universities, and builds a Chinese language teaching system based on VR after designing and realizing the key database and main teaching modules. And put it into the practice of teaching Chinese language in colleges and universities, according to which to explore the path of cultivating Chinese language dual-creation talents. Students majoring in Chinese language and literature in college C are selected as the experimental subjects and the teaching experiment is designed. Improve and compare the data of Chinese language literacy and dual-creation ability of the experimental group and the control group before and after the experiment, compare and analyze the teaching effect of the Chinese language teaching system constructed in this paper and the traditional Chinese language teaching mode in colleges and universities, and explore the superiority of the Chinese language teaching system constructed in this paper.

2. Design of Chinese Language Teaching System in Colleges and Universities

2.1. Design of VR-based Chinese language teaching system

The focus of the VR Chinese language teaching system is to create a virtual classroom with a sense of realism and immersion using VR technology to provide high-quality Chinese language education resources to users in different geographical locations. The system adopts Unity3D as the development engine, utilizes

C# language and Playmaker plug-in for development, and utilizes 3ds Max software to construct the models in the scene.

2.2. Realization of Chinese language teaching system based on VR

The realization of the VR Chinese language teaching system takes the smartphone as the mobile terminal, the cell phone display as the observation window, and the VR glasses as the interaction device, through the gaze function of VR technology, it can give the user a sense of realism and immersion, and the user is able to conduct real-time learning of Chinese language and literature in a virtual three-dimensional scene.

Based on the above design ideas, the main technical framework realized by this system is shown in Figure 1.

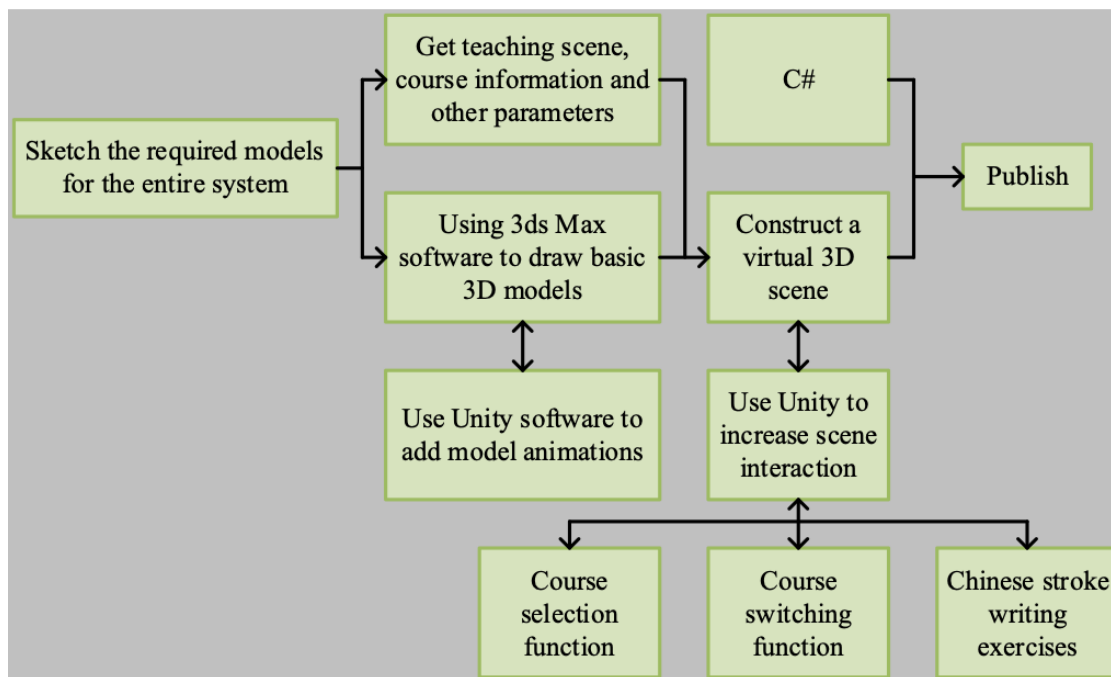


Figure 1: Technical framework of the system

The realization process of VR Chinese language teaching system is shown in Figure 2. The realization of VR Chinese language teaching system is mainly divided into three phases: ① Preliminary information collection and finishing phase, which is mainly to organize the scene model and interactive information involved in the VR teaching system, and collect drawings and effect diagrams related to the system production, so as to prepare for the development of the system. ② 3D modeling and scene construction stage, using the information collected in the first stage for scene modeling, forming the relevant format files in 3ds Max software, and importing into Unity3D engine for scene construction. ③ Human-computer interaction function realization stage, this stage uses Unity3D engine and C# language to realize the human-computer interaction function of the system, export the executable file and complete the realization of the whole system.

2.3. Key database design and implementation

2.3.1. Objectives and steps in database design

The fundamental task of database design is to design a data schema, including: external schema, logical (conceptual) schema, and internal schema) as well as a typical in-service program based on a unit's information needs, processing needs, and the database's supporting environment (including DBMS, operating system, and hardware) [15]. In general, database design should accomplish the following goals:

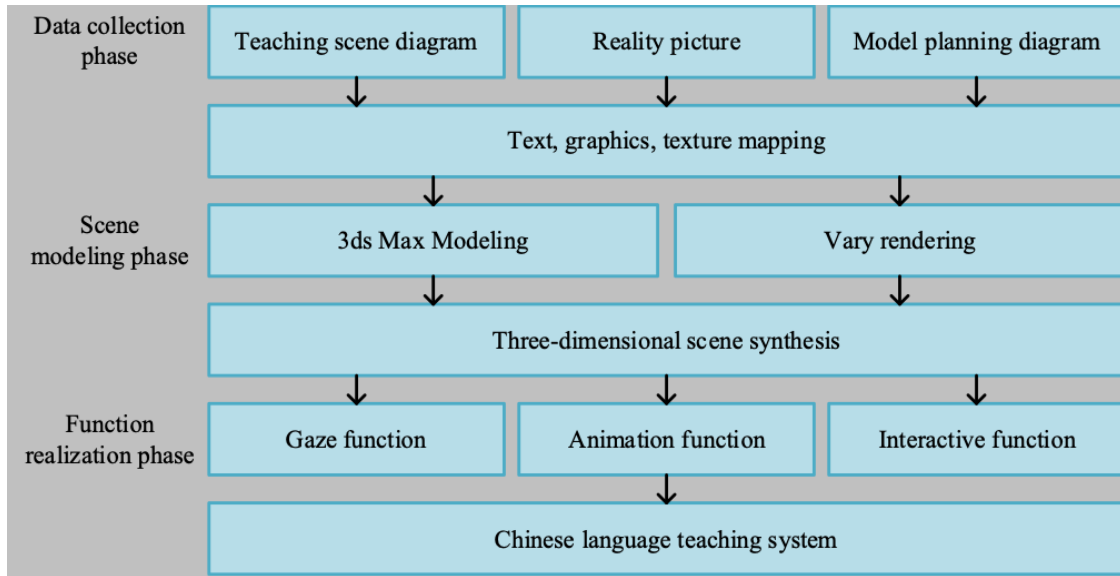


Figure 2: Implementation process of VR Chinese language teaching system

1. Normative design specifications to create a standardized, concise database. In general, database design meets the 3NF (3 Normal Form) requirement.
2. Efficiency: balance between specification and efficiency, appropriate anti-paradigm, to meet the performance requirements of the application system.
3. Compactness: Compactness refers to the agreement on data storage and saving what can be saved under the premise of meeting the application, taking into account the scalability and portability.
4. Ease of use: ease of use refers to the database design is clear and easy to use, with and developers are able to accurately, quickly and clearly understand the design.
5. Database design process includes the following processes: data analysis (requirements analysis), conceptual design, logical design, physical design and implementation and operation and maintenance of several links.

2.3.2. Demand analysis

Database requirements analysis is a database requirements analyst in the investigation of the existing system based on the analysis and confirmation of the user's data needs. The main content of requirement analysis is data structure analysis, data definition analysis, data manipulation analysis, data integrity analysis, data security analysis, database performance analysis.

Database requirements analysis is the basis of database development, the quality of its work will directly affect the database design and even the success or failure of the entire database system development work.

2.3.3. Conceptual design

Conceptual design is the representation of data and interconnections based on requirements analysis using a conceptual data model, for example, an E-R (Entity-Relationship) data model. A conceptual data model is a DBMS-independent, real-world oriented data model. There are generally two different approaches: the centralized schema design approach and the view integration approach. There are two important principles at this stage: the principle of ease of understanding and the principle of completeness.

2.3.4. Logic design

Logical model design is the conversion and optimization of conceptual models to relational models. The aim is to do a good job of converting to physical model design, which should follow the following

principles: naming conventions, naming languages, design specifications, integrity design principles, and data integrity.

2.3.5. Physical design

The task of physical design is to choose the appropriate storage structure and access paths, that is, to design the inner schema of the database. The inner schema is different from the logical schema in that it is not directly user-oriented, and the general user does not necessarily need to understand the design details of the inner schema, which is transparent to the user. Its design purpose is mainly two: one is to improve the performance of the database, especially to meet the performance requirements of the main application. The second is to utilize space efficiently. Of these two goals, the first is perhaps the more important, since performance is still the weak link in today's database systems.

2.4. Functional design of the main modules of the system

2.4.1. Teaching management module

Teaching management is the comprehensive management of the teaching process in accordance with the laws and characteristics of teaching and learning in order to achieve teaching goals. Teaching management includes the following functions: quality (achievement) management, learner management, course management, and EMB management. The specific functions are shown in Figure 3.

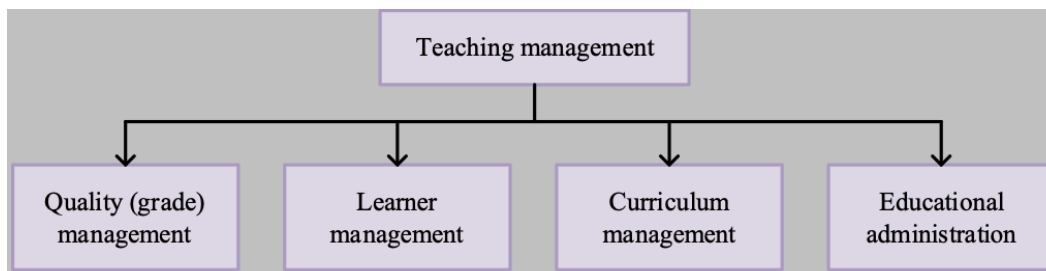


Figure 3: Teaching management structure

2.4.2. Management of the teaching and learning process

Teaching process is a bilateral activity process composed of teachers' teaching and students' learning, which is composed of teachers, students, teaching means and content and other elements. Teachers are the dominant factors, students are the main factors, teaching tools and content are objective factors. Teachers in the teaching process by the preparation of lessons, classes, counseling, homework correction, examination of the five basic components, students by the pre-course preparation, classroom learning, post-course review, examination, mastery and application of the five basic components, management work is also in accordance with the law of the teaching process to determine the sequence of work, the establishment of appropriate methods, and through the planning, implementation, checking and summarization of measures to achieve the goal of the process of activities.

In this topic, it specifically refers to the teacher's design of the teaching process, including the design of teaching activities, as well as the evaluation of teaching activities, management and other functions. The specific functions are shown in Figure 4.

Course management: including course application, course approval and other operations.

Process Supervision: mainly refers to monitoring students' learning situation, such as: logging into the system situation, reading situation, etc.

Assignment Correction: Teachers correct the assignments submitted by students.

Grade Inquiry: Grade inquiry includes the summary inquiry of students' grades and the function of students' personal grade inquiry.

Extra-curricular tutoring: the system provides tutoring to students through emails and forums.

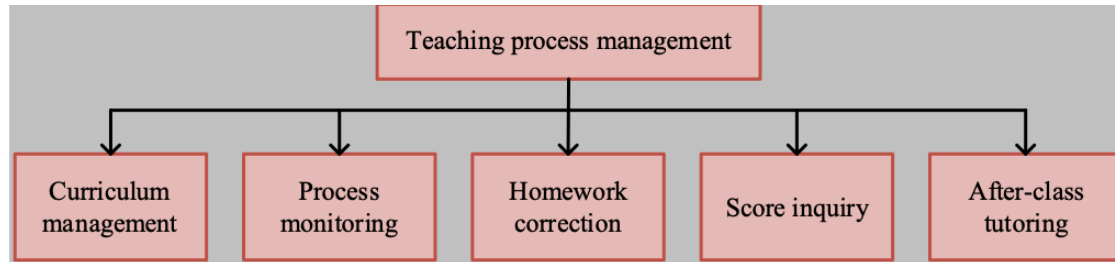


Figure 4: Teaching process management

2.4.3. Teaching resource management

Teaching resources refer to the teaching and learning to provide students with appropriate learning resources, such as text, sound, video and other formats for students to learn. Learning resource management should include, classification management, resource upload management.

2.4.4. Learning assessment module

Learning evaluation includes two functions: formative evaluation and summative evaluation. Formative evaluation or summative evaluation is completed by online examination in this system. The functions are shown in Figure 5.

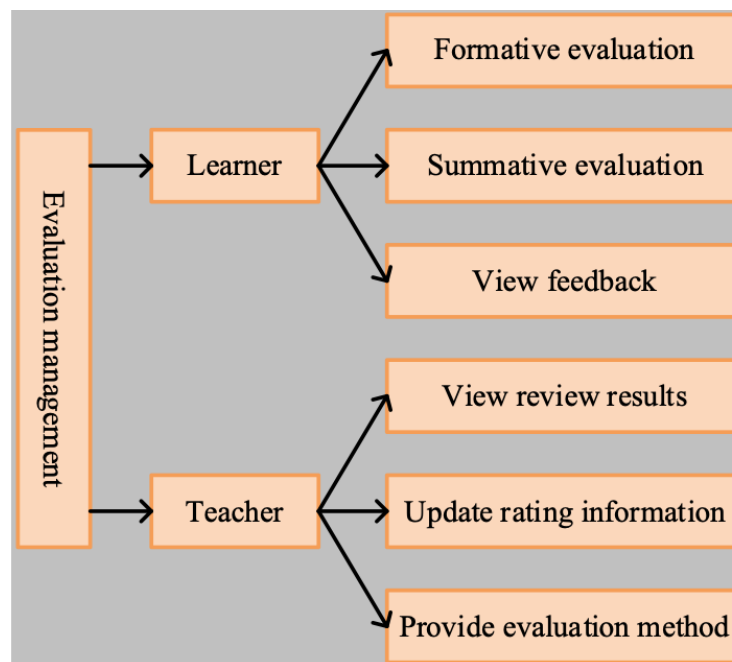


Figure 5: Teaching evaluation management

2.4.5. Learning support modules

Learning support module mainly refers to provide students with communication, communication tools to achieve learning and teachers can communicate with each other smoothly, students can through, teacher microblogging, learning forum, email or other online tools to teachers to ask questions and teachers to provide answers for students. This function is shown in Figure 6.

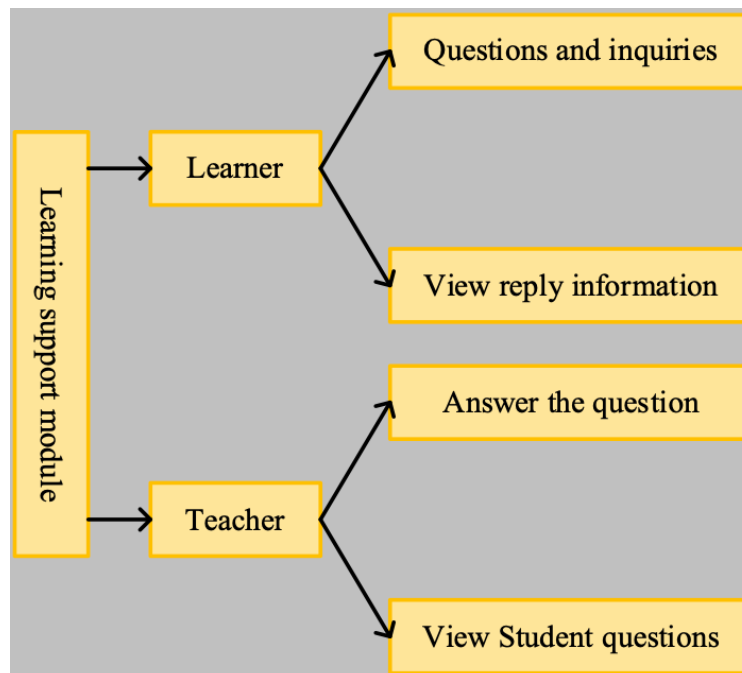


Figure 6: Teaching support module

3. Path of Cultivating Dual Creative Talents in Chinese Language

Dual-creation education in Chinese Language and Literature majors has been explored mainly in six aspects, including cultivation concept, curriculum system, teaching mode, practice platform, faculty construction and evaluation standards [16].

3.1. Establishment of the concept of “stratification + integration” for the cultivation of liberal arts

In addition to the popularization of the concept of “dual creation” in schools, the Chinese language and literature majors should also establish the concept of large liberal arts and build a training program that meets the needs of dual-creative talents. At present, in addition to Chinese language and literature, liberal arts majors also include network and new media, advertising, radio and television editing and directing and other undergraduate majors, so we can explore the intersection between similar majors, give full play to the advantages of problem-oriented practical teaching and discipline synthesis, and cultivate students’ composite application ability by solving the pain point problems of the local socio-economic and cultural development, so as to enhance their competitiveness in employment. On the basis of the concept of liberal arts, the dual-creation education of Chinese Language and Literature majors follows the principles of combining theory and practice, focusing on practical training, equal emphasis on integration of specialization and creation, integration of specialties and integration of industry and education, combination of general education and layered cultivation, full coverage and pilot experiments, and balance of common and individual cultivation, relying on the group of liberal arts majors and combining with the characteristics of the region, the industrial characteristics and the characteristics of the university, forming The core concept of “layered + integration” has been formed.

3.2. Constructing a curriculum

In the curriculum system of Chinese language and literature talent training program set up dual-creation general education course modules, local characteristics course modules, interdisciplinary course modules, industry-academia integration course modules.

3.3. Adoption of the teaching mode of “competition promotion + project-driven”

Conduct a comprehensive research on the subject competitions that Chinese Language and Literature majors can participate in, screen out the competitions suitable for students of this major, give comprehensive consideration to the knowledge mastered by Chinese Language and Literature majors in each grade and the actual situation of the specialized courses offered, and guide the students to participate in them.

The three items of professional characteristic projects, dual creation projects and university research projects drive dual creation education and form the practice mode of subject system.

3.4. Established practice platforms

The opening of enterprise practice bases and the construction of a “dual-creation” educational environment through school-enterprise cooperation have further enhanced collaboration with enterprises and provided a good practical platform for the cultivation of dual-creation talents.

3.5. Building the faculty

At present, the construction of dual-teacher teachers of Chinese language and literature majors mainly includes measures such as external introduction, internal training and internal integration. External attraction is to introduce teachers with industry background from government, industry, enterprises and schools, and to let industry tutors participate in classroom teaching and talent cultivation. Internal training is to train teachers through the ESB platform, and also to promote the transformation of teachers through the Applied Talent Cultivation Skills Competition and strengthening practical teaching. Internal integration is to integrate the existing teachers of the school and form an inter-disciplinary teaching team.

3.6. Progressive improvement of the evaluation system

Dual-venture education is guaranteed from the guiding ideas of talent cultivation program and the construction of cultivation mode, the reform of the thesis system, the construction of dual-venture platform, the recognition of credits and hours of the second classroom, the reform of the system of teachers' scientific research projects, etc. In the future, the existing evaluation system will be further improved, so as to maximize the support of the system of innovation and entrepreneurship education. In addition, Chinese Language and Literature majors also incorporate disciplinary competitions and dual-creation projects into the assessment of professional courses to encourage students to participate in competitions and dual-creation enthusiasm.

4. Experimental Design

4.1. Research questions

The effect of teaching Chinese language in colleges and universities is the ultimate goal of Chinese language teaching. It occupies a pivotal position in the process of Chinese language teaching and learning, while traditional teaching methods tend to reduce students' interest in learning, which is not conducive to the development of learners' Chinese language literacy as well as bicultural ability. Therefore, in order to ensure that students can better acquire Chinese language knowledge and improve their dual-creation ability and literacy, this study explores the feasibility of applying the Chinese language teaching system constructed in this paper to Chinese language teaching in colleges and universities by means of tests, questionnaires and interviews and tries to answer the following questions:

1. How can the Chinese language teaching system be applied to Chinese language teaching in colleges and universities?
2. How effective is the Chinese language teaching system in colleges and universities in improving students' Chinese language literacy?
3. How effective is the Chinese language teaching system in colleges and universities in cultivating students' bicultural ability?

4.2. Subjects of the study

This study was implemented in College C. The subjects of the study were students in two Chinese language and literature classes in the first year, with 55 students in the experimental group and 55 students in the control group. In the teaching process of the experimental group, the Chinese language teaching system in colleges and universities constructed in this paper was used, while the control group was taught by traditional Chinese language teaching methods. The author found in the experimental process that there is no significant difference between the scores of the two groups of students in the pre-experimental Chinese language literacy and bicultural ability.

4.3. Research methodology

4.3.1. Questionnaire method

In order to understand the situation of teaching Chinese language in colleges and universities, this study distributed questionnaires to students in the experimental and control groups. The pre-test questionnaire is mainly used to understand the current problems in teaching Chinese language in colleges and universities, and the post-test questionnaire is mainly used to understand the effect of the experiment as well as the students' needs, and the same questionnaire is used before and after the study. A total of 220 questionnaires were distributed and 220 were recovered.

4.3.2. Test methods

Two types of tests, Chinese language literacy test and dual-creation ability test, will be conducted in this experiment. In order to explore whether using the college Chinese language teaching system designed in this paper is helpful to students' Chinese language literacy and bicultural ability, the author organizes two groups of students to take the Chinese language literacy test and bicultural ability test before and after the experiment. After the experiment, the author used SPSS26.0 to analyze and compare the data of the two tests.

5. Analysis of Teaching Effectiveness

The study measured the dimensions of Chinese language literacy and bicultural competence in the experimental and control groups before and after the experiment, so as to compare the changes in the two groups of students before and after the experiment. The Chinese language literacy includes: general knowledge of literature, literary theory, Chinese language foundation, writing ability and critical thinking. Dual-creation ability includes: creativity, innovation, organization and management, risk management and resource integration.

5.1. Analysis of pre- and post-test results for the experimental group

The mean, also known as the arithmetic mean, is often used to reflect the general level of the phenomenon as a whole, or the centralized trend of the distribution. It can be intuitive and concise to see the general situation of a group of data, the average level, but also can be used to compare the difference between two groups of data.

The changes in the mean values of the scores of the students in the experimental group in each dimension before and after the experiment are shown in Table 1. As shown in Table 1, students' scores after the experiment are significantly higher than those before the experiment, and the mean values of the scores have been increased to different degrees, among which the largest change in the mean value of the scores is the organizational and management ability, which has been increased by 13.60 points, followed by the innovation ability, which has risen by 11.96 points, and the lesser change is the creativity (1.11), in addition, the students of the experimental group are more successful in the risk management ability (11.86), the writing ability (11.42) and Literary Theory (7.03) had more significant changes in their scores.

The paired t-test is used to analyze whether there is a significant difference between the pre- and post-scores of the students' Chinese language literacy and bicultural ability in the experimental group, so as to reflect the influence of the course on the students' Chinese language literacy and bicultural ability and to

Table 1: Change of mean value of pre-test and post-test of experiment group

Experimental group	N	Mean of pretest	Mean of posttest	Change of mean value
Literary common sense	55	31.52	36.48	4.96
Literary theory	55	29.95	36.98	7.03
Chinese literary basis	55	28.61	35.09	6.48
Writing ability	55	26.98	38.40	11.42
Critical thinking	55	32.70	38.23	5.53
Creativity	55	36.29	37.40	1.11
Innovative ability	55	25.87	37.83	11.96
Organizational management	55	31.01	44.61	13.60
Risk management	55	25.96	37.82	11.86
Resource integration capability	55	34.01	39.80	5.79

reflect the experimental effect through the analysis of differences. The results of the paired t-test for the experimental group are shown in Table 2.

Table 2: Paired T-test results of experimental group

Pair	Mean pair difference	t	N	Sig. (2-tailed)
Literary common sense	4.962	4.459	55	.005
Literary theory	7.031	12.153	55	.002
Chinese literary basis	6.483	9.498	55	.002
Writing ability	11.422	18.098	55	.000
Critical thinking	5.528	6.492	55	.003
Creativity	1.113	1.556	55	.068
Innovative ability	11.964	20.268	55	.000
Organizational management	13.598	24.156	55	.000
Risk management	11.862	18.462	55	.000
Resource integration capability	5.793	7.455	55	.003

From the significance test results in Table 2, it can be seen that the mean values of students' 10 dimensions of Chinese language literacy and dual creativity before and after the experiment in the experimental group have been improved to different degrees, and the significance is less than 0.05 except for creativity, which indicates that after the teaching of Chinese language in the digital college, students have improved in the general knowledge of literature, theory of literature, foundation of the Chinese language, writing ability, critical thinking, creativity, organization and management ability, Risk Management Ability, and Resource Integration Ability in the 9 dimensions of Chinese language literacy and biculturalism as a whole improved more significantly. It is worth noting that students' improvement in the four dimensions of writing ability, creativity, organizational management ability and risk management ability is very significant (all significance is 0.000). However, the students' improvement effect in the dimension of creativity is the smallest, with a significance greater than 0.05, and its pre- and post-test changes are not significantly different.

From the data results of mean comparison and paired t-test, the overall improvement of mental health of students in the experimental group before and after the teaching was more obvious. In the teaching of the 10 topics of general knowledge of literature, literary theory, foundation of Chinese language, writing ability, critical thinking, creativity, innovation ability, organization and management ability, risk management ability, and resource integration ability, it can effectively improve the students' level and literacy of Chinese language and deepen the development of students' bicultural ability. The emotional resonance of students in teaching is more obvious, and the arrangement of different teaching activities online and offline in teaching

can enable students to integrate into the teaching situation, bring knowledge reserves for students, and improve the enthusiasm and initiative of students' active participation.

5.2. Analysis of pre- and post-test results in the control group

The control group was tested before and after the experiment based on the indicators of the dimensions of Chinese language literacy and dual-creative ability set in this paper, and the experimental data were collected, and the data were statistically examined to see whether there was a big difference in the control group's Chinese language literacy and dual-creative ability in the experimental pre- and post-tests through the comparative analysis of the pre-tests and post-tests of the control group, the results of which are shown in Table 3.

Table 3: Change of mean value of pre-test and post-test of control group

Experimental group	N	Mean of pre-test	Mean of posttest	Change of mean value
Literary common sense	55	30.65	30.96	0.31
Literary theory	55	28.98	29.36	0.38
Chinese literary basis	55	27.96	28.15	0.19
Writing ability	55	27.10	28.56	1.46
Critical thinking	55	32.97	34.03	1.06
Creativity	55	36.01	37.15	1.14
Innovative ability	55	26.38	25.33	-1.05
Organizational management	55	30.47	30.42	-0.05
Risk management	55	26.25	26.41	0.16
Resource integration capability	55	33.61	32.78	-0.83

As can be seen from Table 3, there is no significant change in the data of the control group before and after the experiment in the 10 dimensions of Chinese language literacy and bicultural ability. The changes in the scores of seven dimensions, namely, general knowledge of literature, literary theory, Chinese language foundation, writing ability, critical thinking, creativity, and risk management ability, are positive, but none of them rises more than 1.50. Among them, writing ability, critical thinking, and creativity have the biggest improvement, but only 1.46, 1.06, and 1.14. The smallest improvement is in risk management ability (0.16). On the other hand, the three dimensions of innovation ability, organizational management ability and resource integration ability showed a decreasing trend, decreasing by 1.05, 0.05 and 0.83 points respectively. It shows that after traditional Chinese language teaching in the control group, the students' Chinese language literacy did not change much and there was a regression in the bi-innovation ability.

Further, the paired samples t-test was conducted on the pre- and post-test data of Chinese language literacy and dual creativity ability of the control group, and the specific results are shown in Table 4. Observation of Table 4 shows that the significance Sig. values of general knowledge of literature, literary theory, Chinese language foundation, writing ability, critical thinking, creativity, innovation ability, organization and management ability, risk management ability, and resource integration ability are 0.483, 0.268, 0.614, 0.058, 0.074, 0.063, 0.286, 0.886, 0.623, and 0.196 respectively (all greater than 0.05), indicating that the control group did not mention any significant improvement in students' Chinese language literacy and bi-initiative ability after experiencing traditional Chinese language teaching. Traditional Chinese language teaching did not produce a significant effect on the improvement of students' Chinese language literacy and bicultural ability.

6. Conclusion

This study builds a college Chinese language teaching system with the help of virtual reality technology and puts it into the use of Chinese language teaching in colleges and universities, and uses it to explore the cultivation path of Chinese language dual-creative talents, and to explore new possibilities for the development of Chinese language and literature majors and students in colleges and universities.

Table 4: Paired T-test results of control group

Pair	Mean pair difference	t	N	Sig. (2-tailed)
Literary common sense	0.312	0.538	55	.483
Literary theory	0.384	0.623	55	.268
Chinese literary basis	0.188	0.379	55	.614
Writing ability	1.463	2.365	55	.058
Critical thinking	1.059	1.846	55	.074
Creativity	1.142	2.186	55	.063
Innovative ability	-1.051	1.755	55	.286
Organizational management	-0.052	0.065	55	.886
Risk management	0.162	0.331	55	.623
Resource integration capability	-0.834	0.685	55	.196

1. The scores of students in the experimental group before and after the experiment in the 10 dimensions of Chinese language literacy and dual-creation ability have increased, and the rate of increase, in descending order, is as follows: organization and management ability (13.60) ; innovation ability (11.96) ; risk management ability (11.86) ; writing ability (11.42) ; literary theory (7.03) ; Chinese language fundamentals (6.48) ; resource integration ability (5.79) ; Critical Thinking (5.53) ; General Literary Knowledge (4.96) ; Creativity (1.11). Except for the creativity dimension, the significance sig values of the other nine dimensions are all less than 0.05, indicating that the Chinese language teaching system constructed in this paper in colleges and universities is able to effectively improve students' Chinese language literacy and dual creativity.
2. The changes in the scores of the 10 dimensions of Chinese language literacy and entrepreneurship and entrepreneurship ability of the control group before and after the experiment were 0.31, 0.38, 0.19, 1.46, 1.06, 1.14, -1.05, -0.05, 0.16 and -0.83, respectively, and the significant SIG values of each dimension were greater than 0.05.

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