Research on the Teaching Practice of Songjiang "Dancing Grass Dragon" Physical Education Option Course Based on the Inheritance of National Intangible Cultural Heritage

Huangsheng Kong[a], Changying Song[b*]

Shanghai Vocational College of Agriculture and Forestry, Shanghai, China

[a]841777186@qq.com,[b,*]14512@shafc.edu.cn

Abstract. This study adopts methods such as literature review, questionnaire survey, experimental comparison, and mathematical statistics to explore the practical patterns, quality education, and online education of the intangible cultural heritage Songjiang "Dance Grass Dragon" elective course students in Shanghai universities. The study found that the intangible cultural heritage Songjiang "Dance Grass Dragon" elective course adopts a "three classroom" teaching design in ethnic cultural identity, team collaboration The advantages of cultural inheritance and other educational effects, as well as the existing problems, research suggests that: 1. The implementation of the "three classroom" teaching design highlights the educational effects of the intangible cultural heritage "Dance Grass Dragon" course; 2. The intangible cultural heritage attribute of the Songjiang "Dance Grass Dragon" course enhances students' sense of national cultural pride and identity; 3. The application of technologies such as digitization, AI dynamic capture, and virtual simulation effectively enhances students' theoretical knowledge and motor skills, but there are insufficient teaching resources.

Keywords: Ethnic culture; Dancing grass dragon; Teaching practice; AI dynamic capture; Virtual simulation.

1 INTRODUCTION

In the context of building a beautiful countryside, the intangible cultural heritage "Dance Grass Dragon" project is one of the important folk activities with representative agricultural culture. The grass dragon culture, traditional ideas, national spirit, etc. contained not only affect the lives of the Chinese people, but also inspire young people in the new era to work hard to strengthen their ideals and beliefs, positive life values, and ideological and moral qualities[1]. With the continuous deepening of the construction of beautiful rural areas, the aging population in rural areas is becoming increasingly severe, and the trend of imbalance in the proportion of the elderly, middle, and young cannot be reversed in the short term. With the progress of the times and the rapid development of new media, the attractiveness of traditional sports and the enthusiasm for

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paying attention to agricultural customs have generally decreased. The rural agricultural environment on which the intangible cultural heritage "Dance Grass Dragon" relies for survival is undergoing significant changes. Therefore, in the current context of beautiful rural areas, how to continue the intangible cultural heritage "Dance Grass Dragon" project among young people in the new era, integrate it into the construction of beautiful rural areas, and actively participate in the co construction of the local intangible cultural heritage "Dance Grass Dragon" school and village in Songjiang; At the same time, it is of great significance to fully utilize the advantages of new media, release real-time Songjiang "Dance Grass Dragon" videos, and let the public know about performance trends, skill displays, public welfare training, and other information, providing technical support and information services for the creation of intangible cultural heritage products with distinctive cultural tourism characteristics in the region. It is also a comprehensive test of the effectiveness of intangible cultural heritage on campus at present[2].

2 Research method

2.1 Literature method

Through keyword search, more than 60 journal papers were searched in databases such as CNKI and the National Intangible Cultural Heritage website, and a comparative analysis was conducted on the situation of dancing grass dragons carried out across the country, laying a theoretical foundation for further analysis of this study.

2.2 Questionnaire survey method

Based on the content and purpose of this study, a survey questionnaire was designed and distributed to 360 students from some higher education institutions in Shanghai. A total of 358 questionnaires were collected, with 2 invalid questionnaires removed and 356 valid questionnaires were obtained. The effective recovery rate was 99.4% and 98.7%, respectively.

2.3 Experimentation

(1)Experimental subjects.

The teaching situation of the intangible cultural heritage Songjiang "Dance Grass Dragon" elective course for freshman students in Shanghai higher education institutions is the research object. Before the experiment, targeted physical health tests were conducted, including tests on explosive power, endurance, flexibility, etc. Using a stratified proportional sampling method, the results of 120 male and female students were analyzed, and the results were in line with a normal distribution pattern. There were 180 students in the experimental class and 180 students in the control class, with 120 boys and 60 girls respectively, Different specialized teachers attend classes at the same time period.

(2) Experimental time.

September 15, 2022 to January 14, 2023.

(3) Experimental content.

In order to confirm the impact of the "three classroom" teaching design on the physical education curriculum of the intangible cultural heritage Songjiang "Dance Grass Dragon" elective course, an experimental study was conducted on some higher education institutions in Shanghai. The experimental class and control class held 2 physical education classes per week and conducted 30 physical education teaching studies. The experimental design is as follows:

①Experimental Design: Implementation Process of Dance (Grass) Dragon Course (Table 1)

Table 1. Comparison of the average scores of creativity and skills in dance (grass) dragon between the experimental class and the control class

Entry name	Content (Experimental Class)	Content (control class)
Teaching content	Songjiang Dance Grass Dragon's "Prayer", "Traveling Cloud", "Seeking Rain", "Rolling Dragon", "Flipping Tail", "Taking Water", and "Returning to the Palace" technical movements.	A combination of technical movements such as dragon dance, dragon swimming, piercing, rolling, and group drawing.
Teaching method	Methods such as explanation, demonstration, gaming, video observation, field investigation, etc	Methods such as explanation, demonstration, gaming, and video observation.
Teaching Steps	Introduce before class, teach new courses, consolidate exercises, expand after class, and engage in social practice.	Introduce before class, teach new courses, consolidate exercises, and expand after class.
Teaching evaluation	Physical health, theoretical knowledge and skills in dragon dance, and value-added activities in social design.	Physical health, theoretical knowledge and skills in dragon dance.

② Control of experimental factors:

The students in the experimental class and the control class have no difference in their attitudes towards the study of physical education elective courses, and their mastery of dragon dance techniques is the same (both are zero basic). There is no difference in the venues and sports equipment used. The teaching process of the experimental class is different from that of the control class. Although both classes have teaching equipment for video playback and recording, mainly utilizing existing mobile and tablet tools, dragon dance video resources, and learning communication resource libraries, targeted centralized teaching is conducted through the Songjiang Dance Grass Dragon Intangible Cultural Heritage Inheritance Base; Although not taught by the same teacher, the teaching syllabus, teaching progress, teaching hours, and grading standards of all classes are consistent, ensuring that the difficulty level of course technical actions is the same, and the assessment content is unified to avoid subjective differences.

2.4 Mathematical Statistics

This study used statistical software such as Excel and SPSS to process and analyze the experimental results

3 Result and Analysis

3.1 Creation and technical exercises of traditional dance (grass) dragon routines

The assessment of the creation of traditional dance (grass) dragon routines and technical exercises on the research subjects showed that (Table 2): before the experiment, the students in the experimental class and the control class had zero foundation in dance (grass) dragon skills, no significant difference, and were at the same basic level, providing a prerequisite for the effective implementation of the experiment.

After the experiment, the creative score of the male (grass) dragon dance in the experimental class was 90.16 points, the average score of the traditional dragon dance routine (3 minutes) performance at the designated time was 87.32 points, the creative score of the female (grass) dragon dance was 89.37 points, and the average score of the traditional dragon dance routine (3 minutes) performance at the designated time was 81.89 points. The creative score of the male students in the control class for the traditional dragon dance routine (3 minutes) was 82.78 points, the average score of the traditional dragon dance routine (3 minutes) performance at the designated time was 76.61 points, the creative score of the female students' dragon dance routine (3 minutes) performance was 84.51 points, and the average score of the traditional dragon dance routine (3 minutes) performance at the designated time was 74.15 points. The male and female students in the experimental class had creative dragon dance routines (3 minutes) The average score increase of traditional dragon dance routine skills within the specified time is significantly higher than that of the control class; The difference in evaluation scores between boys and girls in the control class is not significant; But the average performance of male students in the experimental class in dragon dance skills is better than that of female students, with a significant difference.

The combination design of classroom teaching, after-school expansion, and online education effectively stimulates students' learning interest [3]. After class social practice activities are the source of open students' innovative consciousness, and online education is a key factor in breaking through teaching difficulties and important means of enhancing students' learning interest.

Table 2. Comparison of the average scores of creativity and skills in dance (grass) dragon between the experimental class and the control class

	After the experiment (male)				After the experiment (female)			
Class	Experimental class		Control class		Experimental class		Control class	
	Creativity	Athletics	Creativity	Athletics	Creativity	Athletics	Creativity	Athletics

Average value	90.16	87.32	82.78	76.61	89.37	81.89	84.51	74.15
Standard deviation	11.34	12.71	12.53	13.42	14.23	13.31	12.17	12.65
T value	Creativity:4.657		Athletics:3.816		Creativity:3.281		Athletics:2.161	
Sig	Creativity:0.013		Athletics:0.013		Creativity:0.025		Athletics:0.012	

3.2 Mastery of Theoretical Knowledge Level in Dance (Grass) Dragon Option Course

Due to the presence of indoor venues, the teaching of dance (grass) dragons will not be affected by weather factors. A teaching design of classroom+intangible cultural heritage dance (grass) dragon base+network was adopted, completing a teaching form of 4 sports theories and 4 practical knowledge. The experimental and control classes completed classroom theoretical teaching, superstar learning platform video teaching, and intangible cultural heritage dance (grass) dragon inheritance base learning, and then tested the learning situation of basic theoretical knowledge of dance (grass) dragons, Evaluate the experimental results (Table 3).

The results of this test show that 96 participants in the experimental class scored excellent, accounting for 53.3% of the total number, and the number of people who failed was 0. 27 participants in the control class scored excellent, accounting for 15.1% of the total number, and 1 failed; Through comparative analysis of data, it can be concluded that the inclusion of the intangible cultural heritage dance grass dragon base in the theoretical course teaching process of the experiment has effectively improved the theoretical learning effect of the experimental class, enhanced the visual impact on students' intangible cultural heritage dance grass dragon cultural background, and stimulated students' theoretical knowledge reserves and application through the practice of the base. For example, when watching the development process of the intangible cultural heritage dance grass dragon, students can intuitively feel the different shapes and manifestations of dragons in different periods, which is conducive to the inheritance and development of traditional Chinese dragon dance culture, and also enhances students' relevant theoretical knowledge level and physical education discipline cultivation.

Table 3. Students' mastery of basic knowledge in dragon dance elective courses

Class	Proportion	Failure	Pass	Good	excellent
Experimental class	Number	0	16	68	96
	Proportion	0%	8.9%	37.8%	53.3%
Control class	Number	1	87	65	27
	Proportion	0.5%	48.3%	36.1%	15.1%

3.3 Application of Digital Technology in Dance (Grass) Dragon Option Course

With the continuous promotion of information technology teaching in universities, the Dance (Grass) Dragon elective course has also actively carried out online course construction. The Dance (Grass) Dragon online course has been completed on the Super Star Learning Platform. Through AI dynamic capture technology (Figure 1) and virtual simulation of body function changes (Figure 2), the Dragon Dance online course has completed the 8-character dragon dance, dragon swimming, wearing Teng, tumbling The construction of 16 micro lesson videos on technical actions such as action combinations for graphic modeling; The intangible cultural heritage dance grass dragon online course has completed the construction of 8 micro course videos on technical actions such as 8-character dragon dance, dragon swimming, piercing, rolling, and group drawing, as well as 8 ideological and political video micro courses on dragon "prayer", "cloud movement", "seeking rain", "rolling dragon", "flipping the tail", "fetching water", and "returning to the palace". The application of virtual hair simulation monitoring technology effectively grasps the changes in students' physical functions and ensures sports safety[4]; AI dynamic capture technology can effectively improve students' athletic ability and technical application level. In online teaching, although there has been no change in the number of courses, there are slight differences in the course content and the resulting effects. The experimental results show that there is also a significant difference in the number of learning views and the number of uploaded learning videos.

Fig. 1. AI Dynamic Capture Technology

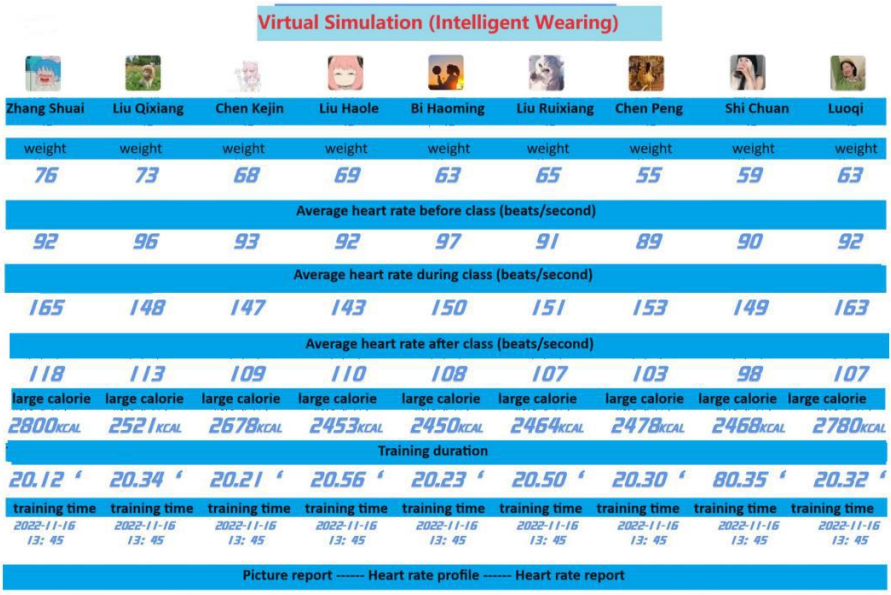

Fig. 2. AI Dynamic Capture Technology

The number of student views in the experimental class reached 1561, indicating an average of 8.7 views per person. The number of uploaded learning videos reached 873, indicating an average of 4.9 views per person; The number of student views in the control class reached 1276, indicating an average of 7.1 views per person. The number of uploaded learning videos reached 719, indicating an average of 4.0 views per person. The results of this test show that the number of views in the experimental class is significantly higher than that in the control class, and there is a significant difference. It can be inferred that intangible cultural heritage culture has a more significant attraction to students, and the participation of the experimental class in online teaching is significantly better than that of the control class.

3.4 Participation in Social Practice of Dance (Grass) Dragon Option Course

The ideological and political education model of curriculum, with the first classroom as the core and the second classroom as the extension [5], and the inheritance of traditional intangible cultural heritage as the environment infiltration, actively participates in cultural construction, dragon dance competitions, services for agriculture, rural areas, and other activities, improves the quality of physical education talent cultivation in schools, and enhances students' enthusiasm for participating in the inheritance of national intangible cultural heritage. This study combines the intangible cultural heritage of the Songjiang "Dance Grass Dragon" to gradually expand the influence and dissemination of the intangible cultural heritage dance grass dragon on campus[6].

The experimental class student dance grass dragon team participated in the intangible cultural heritage dance grass dragon competition and won two national intangible

cultural heritage awards and one provincial award; Invited to participate in 6 service activities for agriculture, rural areas, and farmers, and 4 civilized co construction activities, with a total of 260 talents; The experimental class students participated in the intangible cultural heritage dance grass dragon competition and won three provincial-level awards. They were invited to participate in the service for agriculture, rural areas, and farmers activities 0 times, and participated in the civilized co construction activity 1 time, with a total number of people reaching 80; The results of this test show that the experimental class participating in social practice activities is significantly better than the control class, and there is a significant difference. It can be inferred that the college attaches great importance to the integration of intangible cultural heritage into the campus and the brand influence of intangible cultural heritage dance grass dragon culture [7], which also indicates that the popularity of intangible cultural heritage dance grass dragon in rural areas has significantly increased.

4 Conclusion and Suggestions

4.1 Further optimization of teaching design is needed in the intangible cultural heritage dance (grass) dragon elective course

The innovation awareness, dragon dance skills, and theoretical level of the students in the experimental class are significantly better than those in the control class, indicating that the teaching design concept of the "three classrooms" of physical education elective courses, intangible cultural heritage dance grass dragon base, and online courses has effectively improved the teaching effectiveness of teachers, and students' interest in theoretical and technical learning has been stimulated to varying degrees. Therefore, further innovating the teaching design of physical education elective courses is an effective means to improve teaching effectiveness. For example, the goal oriented social practice demonstration activity of the intangible cultural heritage dance grass dragon effectively stimulates students' innovative awareness and ability to use action techniques. Through practical activities, students obtain a stage to showcase themselves, while dragon dance performances enrich the construction of beautiful rural connotations, achieving the goal of achieving win-win situation.

4.2 Further development of online education resources is needed for the intangible cultural heritage dance (grass) dragon elective course

The application of technologies such as digitization, AI dynamic capture, and virtual simulation has effectively improved students' theoretical knowledge and motor skills. However, the popularity of digital technology is not high, and teaching resources are insufficient. For example, encourage physical education teachers to participate in information technology training, enhance their ability to apply technologies such as AI dynamic capture and virtual simulation, and actively apply for high-quality courses and research projects, and create their own micro courses or MOOCK videos; It is also possible to utilize the existing database resources of national and educational depart-

ments for sports projects, download relevant micro courses or MOOC videos, and actively introduce them into the teaching of physical education elective courses to continuously improve teachers' ability to use information technology in teaching.

4.3 The intangible cultural heritage dance (grass) dragon elective course requires further participation in social practice activities

The students of the grass dragon dance team in the experimental class participated in the intangible cultural heritage grass dragon competition and were invited to participate in activities such as serving agriculture, rural areas, and civilization co construction, which were significantly more than those in the control class. Social practice activities are an important part of creating a diversified evaluation of sports elective courses. The grass dragon dance competition and exhibition have become the main battlefield for higher education institutions to inherit national intangible cultural heritage culture. In the performance of dragon dance in social practice, it is significant to establish students' correct worldview, outlook on life, and values. Therefore, it is recommended that physical education elective courses actively participate in social practice activities based on their own characteristics, strengthen students' sense of responsibility, enhance their social service awareness, and broaden the teaching channels of physical education elective courses, The purpose of improving the effectiveness of ideological and political education in the curriculum.

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