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Interest, Collaboration, Autonomous Learning and satisfaction in the Blended Teaching of Martial Arts

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Abstract: This study involves two classes of education majors taking a general Martial Arts course, using traditional teaching methods for one class and blended teaching methods for the other over a semester. It aims to compare the learning outcomes in terms of student interest in Martial Arts, cooperative learning abilities in sports, and independent learning abilities. The goal is to explore the feasibility and effectiveness of the online and offline blended teaching mode in university Martial Arts instruction. The result showed that compared to traditional teaching methods, the implementation of blended learning based on online teaching platforms complements students' interest in learning martial arts, as well as their ability to learn independently and collaboratively. With the implementation of personalized learning, interest has increased, and the abilities to learn independently and through hands-on learning have been cultivated, resulting in improved satisfaction.

Keywords: Blended Teaching; Martial Arts; Interest; Collaboration; Autonomous Learning; satisfaction.

1. Introduction

With the rapid development of information technology and the further reform and deepening of physical education teaching[1] the emergence of modern education modes such as "Internet + education"[2], which continuously pushes forward the change of talent cultivation modes, especially at the early stage of the global outbreak of the new coronavirus pneumonia epidemic.

Blended teaching is a product of education informatization, breaking the traditional time and space limited teaching mode, is teacher-led, students as the main body, combining the advantages of network teaching with the advantages of traditional teaching, to achieve the comprehensive quality of the students and ability to improve the teaching methods, blended teaching can effectively make up for the shortcomings of the physical education subject network learning and the irreplaceability of traditional teaching[3]. However, for martial arts, gymnastics, track and field and other sports courses with strong practical operation, it is impractical to carry out online education only, and it is an inevitable choice to take the combination of online and offline education mode. Wushu, as one of the sports programs, not only enables students to have a healthy body in college teaching, but also carries the important responsibility of cultivating students' correct outlook on life and values, and is the best way for college students to get in touch with and deeply understand the traditional Chinese culture. Therefore, in order to promote the reform of the conventional teaching mode of university wushu, enrich its teaching form, explore the influence of blended teaching on the teaching effect of wushu in colleges and universities, effectively solve the bottleneck problems in the teaching of traditional wushu, and promote the high-quality development of the teaching of wushu, this paper will adopt the research methods of literature, questionnaire survey, mathematical statistics, etc., to select the physical education courses of the Music and Physical Education College of Hubei Enshi College in Enshi City, Hubei Province of China, to be taught at the University of Hubei. Education major wushu general course of two classes, respectively, for the traditional teaching method and blended teaching methods for one semester after learning, for the student's interest in wushu learning, sports cooperation learning ability, independent learning ability and other indicators in the learning effect of the embodiment of comparative analysis, in order to explore the feasibility of the application of the online and offline blended teaching mode in the university wushu teaching and its Teaching effect, to provide theoretical support and practical experience for the subsequent physical education majors martial arts teaching related research.

2. Literature Review

2.1. blended teaching in the field of physical education

Amjad et al [4], used a quantitative experimental research methodology to investigate the effect of using blended learning on the elements of physical fitness of sixth grade students. Two schools in Ajlun Council of Education in Jordan were selected for the study, and a 14-week experimental teaching period was conducted, and the students were tested on the elements of physical fitness before, during, and after the experiment. The results of the study showed that the mean values of the students' exercises in the physical fitness elements in the classes using blended learning were all significant compared to those in the conventional learning classes, and that blended learning had a significant positive effect on the students' performance in the physical fitness elements. Feng[5] compared the differences between blended teaching and traditional teaching in college sports, as well as the Moodle platform research background and related theories were introduced, based on the theoretical aspects of the teaching process, teaching mode, instructional design and other theoretical aspects of physical education teaching, and analyzed the design of the sports blended teaching model based on the Moodle platform. Finally, the questionnaire and teaching experiment data were used to analyze the students'

learning effectiveness and academic performance, and the results showed that blended learning improves the students' learning effectiveness and academic performance. The research methodology used by Sapto Adi and Abi Fajar Fathoni[6] was a developmental study and validity test on physical education schools in Indonesia to find out the physical education schools' blended specifications and components of learning. The analysis yielded 75% of students responded very positively to blended learning. As many as 50% of teachers reported that students are very effective and motivated to learn. Therefore, blended learning is very suitable for use in physical education schools in terms of its characteristics and effectiveness .Bayyat [7] used a quasi-experimental approach to explore and compare the effects of face-to-face teaching and blended learning pedagogical methods on students' performance and motivation to participate in sports. Forty undergraduate female students with no ballet experience at the Faculty of Physical Education at the University of Jordan were selected for a qualitative study using a two-group design model with pre-test and post-test. Pre- and post-test data were collected through the Skills Performance Test and the Motivation for Sport Participation Scale sm-28. The data were then analyzed using descriptive analysis. The results showed that blended learning was effective in improving students' performance and motivating them to participate in sports. Al Awamleh [8] stated in his study that through a number of courses designed by the Faculty of Physical Education and Sports at the University of Jordan, blended learning was combined with components of contact courses and e-learning online modes of study to explore whether blended instructional models affect students' perceptions of achievement goals and satisfaction. Eighty-three university students were selected to participate in a motor learning course offered by the university's School of Physical Education and Sport, and the participants were divided into two groups. Examined through questionnaires, the results of the study showed that students were most satisfied with the quality of instruction, with interaction having a significant effect on self-study.

2.2. blended teaching in the field of non-physical education

López-Pérez [9], by collecting a large number of cases of blended courses at the University of Granada, Spain, found that blended teaching not only reduces the dropout rate of students but also improves students' test passing rate and academic performance, and has an effect on the motivation, self-efficacy, and learning satisfaction of students. Vaughan and Garrison [10] in their study of American scholars surveyed tens of thousands of college students in six colleges and universities in Florida, and the results showed that the performance of students using blended teaching was significantly better than that of students in face-to-face teaching and online teaching. Ilic et al [11] compared blended teaching with traditional teaching and found that blended teaching is better than traditional teaching, and blended teaching can effectively improve students' self-efficacy, stimulate students' interest in learning, and enhance students' ability to learn independently in the process of teaching.. Chitra Nagaraj [12] et al, explored, through methods such as teaching and learning experiments, that the effectiveness of blended learning in anatomy. The teaching experiment utilized a single group pre-test and post-test study design. The content of the five radiographic anatomy modules was transferred to TYRO's learning management system and 100 students were administered a pre-test and a post-test before and after exposure to the modules, with the mean values of the pre-test and post-test scores being 17±5.5 and 26±7.6, respectively, which were statistically significant differences. It was concluded that there was a significant improvement in the knowledge of radiologic anatomy after exposure to the five radiologic anatomy blended learning modules. These modules were well received by the students.

3. Methodology

3.1. Research Locale

The site of this study was Hubei Enshi College, formerly known as Hubei University of Nationalities College of Science and Technology, a prestigious academic institution dating back to 2003.

3.2. Research design

The research to be implemented was designed as a quantitative research methodology, including descriptive and comparative studies. The study aims to investigate the effects of a blended martial arts teaching model on students' interest in learning, collaboration, self-directed learning skills, and satisfaction with teaching. This study is intended to be conducted by using questionnaire survey.

3.3. Sampling Method

In this study, the participants will include 150 physical education students of the class of 2022 from the Physical Education Department of the College of Music and Physical Education at Enshi College in Hubei, given that the students of this grade have different levels of basic knowledge, and awareness of martial arts programs, it is vital to ensure that the sampling method can be adapted to this group, while providing reliable results.

3.4. Data Analysis

In terms of quantitative analysis, the demographic profile uestionnaire will be used to understand the age, gender, grade level, and martial arts course of study of the participants through frequency and percentage distributions. The data collected will be processed in order to evaluate the information collected by calculating the mean and standard deviation to determine the average scores of the evaluations made by the respondents based on the item options in the questionnaire. In addition, independent t-test and analysis of variance (ANOVA) will be used in this study for comparing the means of the two groups to determine if there is a significant difference between them.

4. Results

This study used the frequency and percentage research methods to statistically analyze the Demographic Profile of the Respondents. Table 1 provides a comprehensive breakdown of the demographic information of the participants who responded to the survey. It categorizes the respondents based on several demographic variables: sex, age, grade, and class.

Table 1. Demographic Profile of the Respondents

Demographic Profile	Categories	Frequency	Percentage
Sex	Male	111	76.55
	Female	34	23.45
	Total	145	100.00
Age	18-20 years old	139	95.86
	Above 20 years old	6	4.14
	Total	145	100.00
Grade	Freshman	145	100.00
	Sophomore	0	0.00
	Total	145	100.00
Class	Class 1	29	20.00
	Class 2	29	20.00
	Class 3	28	19.31
	Class 4	29	20.00
	Class 5	30	20.69
	Total	145	100.00

Table 2 presents data on the evaluation level of Interests. Autonomous Learning, and satisfaction in Learning Martial Arts among college students after blended learning.

Table 2. Assessment of Interest, Autonomous Learning, and satisfaction in the Blended Teaching of Martial Arts

Indicators	Mean	SD	Verbal Description/ Interpretation
Interest In Learning Martial Arts	3.45	0.71	Undecided/Moderately Manifested
Collaborative Learning	3.74	0.58	Agree/Strongly Manifested
Autonomous Learning	3.87	0.55	Agree/Strongly Manifested
Teaching Satisfaction	3.83	0.76	Agree/Strongly Manifested

Scale: 1-1.50: Strongly Disagree/Not Manifested; 1.51-2.50: Disagree/Minimally Manifested; 2.51-3.50: Undecided/Moderately Manifested; 3.51-4.50: Agree/Strongly Manifested; 4.51-5.00: Extremely Manifested

Table 3-6 presents an investigation into the variation in teaching satisfaction based on demographic profiles, employing t-tests and ANOVA for statistical inference.

Table 3. Differences in the Interest in Learning Martial Arts based on Demographic Profile

Demographic Profile	Category	Mean	SD	Stat. Value	P-Value
Sex	Male	3.53	0.70	t= 2.70	0.01**
	Female	3.17	0.67		
Age	18-20 years old	3.44	0.70	t= -0.26	0.81
	Above 20 years old	3.55	0.94		
Class	Class 1	3.31	0.49	F=1.41	0.23
	Class 2	3.64	0.90		
	Class 3	3.27	0.64		
	Class 4	3.54	0.64		
	Class 5	3.48	0.77		

***Significant at level of significance = 0.05*

Table 4. Differences in the Autonomous Learning based on Demographic Profile

Demographic Profile	Category	Mean	SD	Stat. Value	P-Value
Sex	Male	3.80	0.57	t=2.27	0.03**
	Female	3.54	0.58		
Age	18-20 years old	3.75	0.58	t=0.45	0.67
	Above 20 years old	3.62	0.68		
Class	Class 1	3.69	0.30	F=2.01	0.06
	Class 2	3.78	0.62		
	Class 3	3.53	0.43		
	Class 4	3.75	0.57		
	Class 5	3.74	0.76		

***Significant at level of significance = 0.05*

Table 5. Differences in the Collaborative Learning based on Demographic Profile

Demographic Profile	Category	Mean	SD	Stat. Value	P-Value
Sex	Male	3.91	0.54	t= 1.32	0.19
	Female	3.76	0.57		
Age	18-20 years old	3.89	0.54	t=1.66	0.15
	Above 20 years old	3.48	0.59		
Class	Class 1	3.73	0.44	F=2.00	0.07
	Class 2	4.08	0.49		
	Class 3	3.78	0.50		
	Class 4	3.94	0.54		
	Class 5	3.83	0.68		

***Significant at level of significance = 0.05*

Table 6. Differences in the Teaching Satisfaction based on Demographic Profile

Demographic Profile	Category	Mean	SD	Stat. Value	P-Value
Sex	Male	3.93	0.71	t=2.67	0.01**
	Female	3.54	0.86		
Age	18-20 years old	3.84	0.76	t=0.35	0.73
	Above 20 years old	3.73	0.82		
Class	Class 1	3.76	0.50	F=2.25	0.07
	Class 2	3.97	0.94		
	Class 3	3.50	0.61		
	Class 4	3.90	0.69		
	Class 5	4.03	0.89		

***Significant at level of significance = 0.05*

The research results show that the majority of respondents are male, accounting for more than half of the total number of respondents. In addition, nearly half of the respondents were between the ages of 18 and 19. In addition, all respondents were freshmen in their freshman year, and the number of students in each class was relatively average.

The respondents showed moderate interest in learning martial arts under the blended learning mode. Some students expressed a strong interest in learning martial arts, but a small number of students had unclear interest intentions; The perception of collaborative learning ability varies from high to low and is not entirely centered; The respondent's self-learning ability has been significantly improved after the implementation of blended learning mode; Regarding teaching satisfaction, student feedback is the best, and under the new blended learning model, students gain more and have high satisfaction.

5. Conclusion

compared to traditional teaching methods, the implementation of blended learning based on online teaching platforms complements students' interest in learning martial arts, as well as their ability to learn independently and collaboratively. With the implementation of personalized learning, interest has increased, and the abilities to learn independently and through hands-on learning have been cultivated, resulting in improved satisfaction. These educational variables are interrelated, and the improvement of one variable may be related to the improvement of other variables.

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