



Construction of Combined Media Teaching Program to Enhance Wushu Jumping Skills

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Abstract

Using the characteristics of the combined media supplementary teaching is to combine the students' auditory and visual, graphics, video together in the process of teaching, and attract the attention of students; the media motivated students to full of interest, better learning and technology communication. Through the combination of media assisted instruction to improve the analysis of the complex movement. The experiment used 20 male wushu beginners. The tests to find the progress were pretest, 4th weeks, the test time were 6th weeks, and 8th weeks, and compared among the results by non-parametric statistics. The researches were mainly supported by the statistical methods at the acceptable significance threshold ($P < .05$).

The results were as follow:

1. Combine media assisted teaching can improve the learning of martial arts jumping skills.
2. In the teaching skills by using combined media showed that the students could grasp the Vacated flying feet, Whirlwind feet, Vacated the outer swing lotus, Spin, improve the students' interest in the sport, so that the students could actively to think over the problems in learning, to cultivate the students' ability of observation and analysis ability.
3. The teaching method of combine media assisted teaching enhances the students' learning satisfaction and interest.

Keywords: Construction of combined media, Teaching program, Wushu jumping skills

Introduction

Since the twenty-first century, the rapid development of information technology has not only changed our work and way of life, but also changed our education and learning methods, greatly improving the efficiency of our work and studying. Higher education for the 21st century education contents and curriculum system and plans were clearly pointed out that the teaching reform should be modernized, which required teachers to change the traditional teaching mode into advanced educational technology, paid full interesting to the multimedia technology in the teaching process. The teaching model paid attention to the role of innovative teaching ideas, so as to improve the quality of teaching. [1]

Wushu students learned and mastered new motor skills through four processes, including generalization, differentiation, integration and automation. The uses of multimedia-assisted martial arts teaching, the teachers could choose to watch the excellent athletes video playback and technical details, so that students were fully aware of the need to pay attention to act or practice which were the formation of the correct learning theory. While learning the stages of action differentiation, they should be allowed to enter the differentiated inhibition phase as soon as possible. At this stage could be used by multimedia video recording technology analysis and processing, from different angles and direction of movement, repeat, suspend or interrupt each movement method by watching the video, master more accurate technology. So that learning and comparison with the elite athletes of the normative action, timely detection and correct the wrong action to enhance the formation of inhibition of differentiation. When you entered the consolidation exercise phase, you could learn to practice, according to the existing teaching courseware by repeatedly viewing, enlarging the image or playing back, slow playing part of the observation. [2][3]

According to the learning process acceding to the pyramid of learning theory.[4]the useful of combined media teaching was very useful to solve the problems of teaching wusu jumping skills which were complex skill learning. So I decided to proof it by this research. The findings will encourage the teachers in higher education to improve their teaching method for sport complex skills class like wushu and other martial arts.

The main research question is as follows:

Could combined media teaching program enhance the students to perform the wushu jumping skills better than the traditional teaching method? Purposes of the study to construct and validate the combined media teaching program to enhance the wushu jumping skills performance.

The objectives of this study (1) To compare the pretest and posttest skills of the wushu jumping performance among the student learned by combined media pregame.(2). To find out the satisfaction of the students on combined media teaching program.

Methods

Subject

Data collection

This study is a experimental design with the following details. A total of 20 male students of Chuxiong Normal University who were major in wushu and were beginning wushu studying. They were included by the physical

fitness score test to ensure their health and then were assigned into one groups they were selected according to the physical fitness test score to ensure their health and then were assigned into the experimental group.

Procedure

This study employed the multiple and complex methodologies were divided into the following stages: 1) Construct experimental lesson plan according to the reviewed literates and expert consult. 2) Verified the lesson plan by IOC, 3) to compare the pretest and posttest with 8 weeks training program; 4) the data were analysis by Wilcoxon Signed Rank Test to compare the training results.

Index of item objective congruence

IOC from three experts was employed for examining whether the primary experiment lesson plan indexes system was suitable for evaluating the performance of beginner wushu jump skill. The indexes a rating of 1 (can use), -1 (not can use), or 0 (not sure). 0.5 to 1 was the accepted average value from three experts.

For verifying lesson plan the rationality, comprehensiveness, and feasibility of the system, the interview issue was conducted with IOC. From the results of IOC and interview, some indexes systems were deleted. The IOC cut the indexes below? Lesson plan 3 Vacated flying feet- Run-up in Cross steps, Lesson plan 6 Vacated flying feet- Vacated and Fall to the ground in the Flexibility (Positive pressure leg) (left , right) and Lesson plan 8 Whirlwind feet – Woke the arm to jumping in Flexibility (Vertical splits),Lesson plan 12 Vacated outer swing lotus - Jumping in the One leg standing swivel ,Lesson plan 13 Vacated outer swing lotus - In situ vacated in the in situ vacated and Lesson plan 15 Spin -Step forward in the Step forward and Lesson plan 16 Spin - In situ jump in the After the swing legs, Lesson plan 1 Spin - Step forward and jumping in the Shoulder flexibility test.

The second time small group experiment was used after the weights of the factors have been obtained. The purpose was to confirm the weights of factors and training programs used in training program by the suggestions from experts.

Measurement of indexes system

1. Experimental monitoring

According to the assist of wushu professional teachers in teaching, the experiment period was 8 weeks with 2 hour per period. The results were compared before and after the test scores results, grades, including (special qualities and special skills, knowledge, ability, especially) by Wilcoxon Signed Rank Test.

2. Combined media courseware design.

The overall framework of the courseware is structured

Wushu jumping skills combination of media courseware of the overall framework is based on teaching objectives and teaching content to determine. This courseware will be related to the teaching content according to a certain structure, with words, graphics, animation, sound and other forms presented in a vivid and interesting environment to the students to explain a concept or a skill, especially the concept of abstraction, through The image of the method becomes easy to understand

Statistical analyses

Descriptive analyses

Data was initially examined for multivariate normal distribution of the collected variables. Mean and standard deviation (SD) calculated for all variables.

Training program

Pre and post value for the dependent variable were analyzed to determine if the distributions were normal. Post-pretest use Dependent One Group Wilcoxon Signed Rank Test (Performance, Physical fitness) if the distributions were normal.

Results

1. The pretest and post test showed the .05 level of difference. It concluded that combined multimedia program of training could enhance wushu jumping skills. (Table 1) The second was to compare the pretest and post-test skills of the beginners wushu jumping.

Table 1 Comparison of pretest and post-test of the total score of 4skills performance (8weeks) with Z-statistic of Wilcoxon Signed Ranks Test

Tests	Mdn	Z	Sig.
Pre	5.00	-3.937*	.000
8weeks	11.00		

*P<.05

A Wilcoxon Signed Ranks Test indicated that performance total score of 4skills was preferred more in 8weeks (Mdn=11.00) than in pretest (Mdn=5.00), Z=-3.937, p< .05.

2. The combine media program could progressively improve the wushu juming skills performance along the week of training. The results of comparing on the pretest and 4 week 6 week and post-test skills of the wushu jumping skills showed the .05 level of difference. (Table 2, 3, 4, 5, 6, 7,8).

Table 2 Comparison of performance skill 1 of the pretest, 4weeks, 6 weeks and 8weeks

	Pre	4weeks	6weeks	8weeks
Mdn	1.00	2.00	2.00	3.00
Z		-2.357*	-3.749*	-3.97*
Sig.	Pre	.018	.000	.000
Z			-3.638*	-3.542*
Sig.	4weeks	-	.000	.000
Z				-3.612*
Sig.	6weeks	-	-	.000

*P<.05

Table 2 Comparing the performance skill 1 of the pretest, 4 weeks, 6 weeks and 8 weeks. The 4 weeks is better than pretest with statistically different at .05 ($Z=-2.357$, $p< .05$) level of significance. The 6 weeks is better than pretest with statistically different at .001 ($Z=-3.749$, $p< .05$) level of significance. The 8 weeks is better than pretest with statistically different at .05 ($Z=-3.97$, $p< .05$) level of significance.

Comparing the performance skill 1 of the 4 weeks, 6 weeks and 8 weeks. The skill 1 in the 6 weeks is better than 4 weeks with statistically different at .05 ($Z=-3.638$, $p< .05$) level of significance. The skill 1 in the 8 weeks is better than 6 weeks with statistically different at .05 ($Z=-3.542$, $p< .05$) level of significance. The skill 1 in the 8 weeks is better than 6 weeks with statistically different at .001 ($Z=-3.612$, $p< .05$) level of significance.

Table 3 Comparison of performance skill 2 of the pretest, 4weeks, 6 weeks and 8weeks

	Pre	4weeks	6weeks	8weeks
Mdn	1.00	2.00	2.00	3.00
Z		-2.832*	-3.916*	-3.977*
Sig.	Pre	.005	.000	.000
Z			-2.919*	-4.099*
Sig.	4weeks	-	.004	.000
Z				-2.840*
Sig.	6weeks	-	-	.005

* $P<.05$

Table 3 Comparing the performance skill 2 of the pretest, 4 weeks, 6 weeks and 8 weeks. of the research participants between pretest and 4 weeks The skill 2 in the 4 weeks is better than pretest with statistically different at .05 ($Z=-2.832$ $p< .05$) level of significance . The skill 2 in the 6 weeks is better than pretest with statistically different at .05 ($Z=-3.7916$, $p< .05$) level of significance. The skill 2 in the 8 weeks is better than pretest with statistically different at .001 ($Z=-3.977$, $p< .05$) level of significance.

Comparing the performance skill 2 of the 4 weeks, 6 weeks and 8 weeks. The skill 2 in the 6 weeks is better than 4 weeks with statistically different at .05 ($Z=-2.919$, $p< .05$) level of significance. The skill 2 in the 8 weeks is better than 6 weeks with statistically different at .05 ($Z=-4.099$, $p< .05$) level of significance. The skill 2 in the 8 weeks is better than 6 weeks with statistically different at .05 ($Z=-2.840$, $p< .05$) level of significance.

Table 4 Comparing of performance skill 3 of the pretest, 6 weeks and 8 weeks

	Pre	6weeks	8weeks
Mdn	1.00	2.00	3.00
Z		-2.111*	-3.739*
Sig.	Pre	.035	.000
Z			-3.704*
Sig.	6weeks	-	.000

*P<.05

Table 4 Comparing the performance skill 3 of the pretest, 6 weeks and 8 weeks. The skill 3 in the 6 weeks is better than pretest with statistically different at .05 ($Z=-2.111$ $p< .05$) level of significance. The skill 3 in the 8 weeks is better than pretest with statistically different at .001 ($Z=-3.739$, $p< .05$) level of significance. The skill 3 in the 8 weeks is better than 6 weeks with statistically different at .001 ($Z=-3.704$, $p< .05$) level of significance.

Table 5 Comparing of performance skill 4 of the pretest and 8weeks with Z-value of Wilcoxon Signed Ranks Test

Tests	Mdn	Z	Sig.
Pre	1.00		
8weeks	3.00	-3.640*	.000

*P<.05

A Wilcoxon Signed Ranks Test indicated that performance skill 4 was performed more in 8 weeks (Mdn=3.00) than in pretest (Mdn=1.00), $Z=-3.640$, $p< .05$.

Table 6 Comparing of pre-posttest of the performance Physical fitness total score of 5 skills (8weeks)

Tests	Mdn	Z	Sig.
Pre	10.00		
8weeks	22.00	-3.839*	.000

*P<.05

A Wilcoxon Signed Ranks Test indicated that the total score of 5skills in Physical fitness test was performed more in 8weeks (Mdn=22.00) than in pretest (Mdn=10.00), $Z=-3.839$, $p< .05$.

Table 7 Comparing of performance Physical fitness skill 1(Left) of the pretest, 4weeks, 6 weeks and 8weeks

	Pre	4weeks	6weeks	8weeks
Mdn	1.00	2.00	2.00	3.00
Z		-3.742*	-3.508*	-4.099*
Sig.	Pre	.000	.000	.000
Z			-2.828*	-4.472*
Sig.	4weeks	-	.005	.000
Z				-3.464*
Sig.	6weeks	-	-	.001

*P<.05

Table 7 Comparing the Physical fitness skill 1 (Left) of the pretest, 4weeks, 6 weeks and 8weeks. The skill 1(Left) in the 4 weeks is better than pretest with statistically different at .001 ($Z=-3.742$, $p< .05$) level of significance. The skill 1(Left) in the 6 weeks is better than pretest with statistically different at .001 ($Z=-3.508$, $p< .05$) level of significance. The skill 1(Left) in the 8 weeks is better than pretest with statistically different at .001 ($Z=-4.099$, $p< .001$) level of significance.

Comparing the performance skill 1 of the 4 weeks, 6 weeks and 8 weeks. Skill between 4 weeks and 6 weeks. The skill 1(Left) in the 6 weeks is better than 4 weeks with statistically different at .005 ($Z=-2.828$, $p< .05$) level of significance. The skill 1(Left) in the 8 weeks is better than 6 weeks with statistically different at .001 ($Z=-4.472$, $p< .001$) level of significance. The skill 1(Left) in the 8 weeks is better than 6 weeks with statistically different at .001 ($Z=-3.464$, $p< .001$) level of significance.

Table 8 Comparing of performance on Physical fitness skill 1(Right) of the pretest, 4weeks, 6 weeks and 8weeks

	Pre	4weeks	6weeks	8weeks
Mdn	1.00	2.00	2.00	3.00
Z		-2.592*	-3.719*	-3.912*
Sig.	Pre	.010	.000	.000
Z			-2.889*	-3.827*
Sig.	4weeks	-	.004	.000
Z				-1.807*
Sig.	6weeks	-	-	.070

*P<.05

Table 8 Comparing the Physical fitness skill 1(Right) of the pretest, 4weeks, 6 weeks and 8weeks. Skill to between pretest and 4 weeks. The skill 1(Right) in the 4 weeks is better than pretest with statistically different at .010 ($Z=-2.592$, $p< .05$) level of significance. skill to between pretest and 6 weeks. The skill 1(Right) in the 6 weeks is better than pretest with statistically different at .001 ($Z=-3.719$, $p< .05$) level of. Significance skill to between pretest and 8 weeks. The skill 1(Right) in the 8 weeks is better than pretest with statistically different at .001 ($Z=-3.912$, $p< .05$) level of significance.

Comparing the performance skill 1 of the 4 weeks, 6 weeks and 8 weeks. Skill between 4 weeks and 6 weeks. The skill 1(Right) n the 6 weeks is better than 4 weeks with statistically different at .004 ($Z=-2.889$, $p< .05$) level of significance. Skill to between 4 weeks and 8 weeks. The skill 1(Right) in the 8 weeks is better than 6 weeks with statistically different at .001 ($Z=-3.827$, $p< .05$) level of significance. Skill to between 6 weeks and 8 weeks. The skill 1(Right) in the 8 weeks and 6 weeks with no statistically different at .070 ($Z=-3.464$, $p> .05$) level of no significance.

3. The results on the analysis of questionnaire survey showed that the design of the combined media supplementary teaching conforms to the requirement of modern teaching education technology development, students' teaching skill instinct application value and consistence showed the full affirmation and evaluation; It is helpful for students to understand the theoretical knowledge and training of technical action comprehensively, which is beneficial to the expansion of knowledge beyond students' teaching materials; It is helpful for students to apply the combination technology flexibly. The combined media assistance can promote students' active intelligence activities and improve their ability to analyze and solve problems which were the results of students' satisfaction with the teaching .

Summary results

For the two purposes of the present study, this chapter puts forward the purpose of the realization. Through qualitative analysis and quantitative analysis, the results are summarized as follows:

1. Combine media assisted teaching can improve the learning of martial arts jumping skills.
2. The teaching method of combine media assisted teaching enhances the students' learning satisfaction and interest.

Discussion

The combination of media assisted teaching on the skills of beginning wushu could improve students' skill performance and learning interest. This findings reason could discuss as the following several aspects.

Combined media teaching can accelerate the information of movement appearance

Technical movements in the sport skill teaching process, there are a lot of complicated structure, to be instantaneous, despite repeated on their teachers in the teaching, demonstration for many times, but it is still difficult to make students to see the action points and main point, exercise is difficult to grasp the change of its action and complete. The timing by combined media can be action essentials, emphasis and difficulty of movement technology, vivid display, also can be incomplete or decomposition technique according to the requirement of the teaching demonstration. The complex technology is presented in slow motion or in a fixed way, and the key points, difficulties

and details of the textbook are presented. Now before students, the teacher deliberately explain its behavioral essentials, so that the students learn in a relatively real visual scene, give full play to the advantages of students cognitive system, the appearance of the complete, clear, specific stored in the brain, is helpful to establish the correct motor imagery.[4]

In the process of teaching experiment, using the martial arts skills combined media supplementary teaching audio-visual combined with function, through detailed graphic illustration, combination of excellent athletes video techniques, so that the students can not only see, can hear again, can also use the hand operation, facilitate their intuitive and comprehensive grasp the learning content. In the process of students' practice, teachers through the camera to the students' action filmed, and finish the exercise in play to students, and then let the students in discussion, comparison and excellent athletes technical movements, the difference between technical movements, the disadvantages of your proposed corrective methods, to enhance students' understanding of the ball breakthrough technology, memory, consolidate effect.

The teaching mode of "teacher-centered" was transformed to "student-centered" teaching mode

The traditional teaching mode of technical teaching is at the core of teachers. In this teaching mode, teachers and books were the only sources of information [5]. A class of dozens of different levels, different way of thinking but at the same pace, the same approach to teaching, cannot adapt to one's personality and characteristics of the students are mostly passive learning environment, is not conducive to cultivate students' practical operating ability, thinking ability and creation ability. [6]The characteristics of combined media is the student to be able to use "autonomous found that autonomous exploration" learning way, and also to develop the students' access to information, information analysis and information processing ability to build an ideal environment. In this teaching mode, the role of teachers is to guide students to form and master motor skills, and to correct students' mistakes in the process of sports skills and improve the teaching effect. This teaching mode has changed the traditional class teaching pattern, teacher's role is no longer only is to provide information, but ability to acquire knowledge, cultivate the students themselves to guide students to explore activities, let students think actively, explore actively, active found that students' main body effect into full play.

Students are interested in learning

Einstein once said, "Interest is the best old teacher". Any kind of teaching skill, if lacking interest, cannot lead to the student's interest, and it will have no vitality. Plato said, "Interest is the best teacher", students in the learning process, only interested in to learn the contents of its, students have the learning motivation; will take the initiative to actively to learn. Education psychology research shows that learning motivation is one of the most realistic, is the most active factor, interest, people learned right in full of interest, often grasp quickly and firmly. As the thick the students' interest in something, the more concentrated the attention, caused its deep observation, memory, imagination, thus rendering best learning state [9][10].. Therefore, the motivation of learners to learn interest is the main means to improve learning efficiency. The novelty, diversity and interest of teaching content, methods, means, activities and environment are important conditions for stimulating learning interest. If interesting in teaching, logical and systematic content to attract students, can cause the students new inquiry activity, resulting in a higher level of curiosity. [7]



Conclusion

1. Combined media martial arts skills development and use, can get rid of the limitation of factors such as time, space, the martial arts theory and skills, two kinds of teaching implementation to optimize the combination of a variety of teaching methods. The development and use of the combined media to assist the teaching in the movement of martial arts jumping skills could help students quickly establish technical action appearances, master the concept of motion, and improve the rationality and practicality of technology application.

2. In the teaching wushu skills by using combined media showed that the students could grasp the Vacated flying feet, Whirlwind feet, Vacated the outer swing lotus, Spin a lot of help, improve the students' interest in the sport, so that the students could actively to think over the problems in learning, to cultivate the students' ability of observation and analysis ability.

3. The training program compares pretest and post test combine media assisted teaching can improve the learning of martial arts jumping skills.

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