Research on the Multimedia Computer Assisted Instruction in College Wushu Teaching and Cultural Inheritance

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Abstract
With the development of modern information technology, multimedia technology has been widely used in physical education. In this paper, the author analyzes the multimedia computer assisted instruction in college wushu teaching and cultural inheritance. The application of multimedia technology in wushu teaching can effectively overcome the inherent drawbacks of traditional teaching, and provide strong support to the teaching mode. Multimedia teaching has diversified, integrated, interactive features, students can watch the wushu action by using multimedia devices. Compared with the traditional CAI software, it is more vivid and intuitive, and emphasis on the active participation of students in learning process. Through the comparative experiment, the results show that multimedia teaching can effectively improve the quality of wushu class teaching, and promote students to grasp the skills.

Keywords: Computer assisted, Multimedia education, Sports teaching

1. INTRODUCTION

With the development of modern information technology, the application of multimedia technology in wushu teaching is more and more extensive. It can create a good teaching situation for education, stimulate interest in learning; can use information technology to the characteristics of interactivity, openness, intelligence and so on, which is convenient for students to create independent search, retrieval, analysis, combination of learning environment, so as to cultivate and improve the students’ ability of getting and dealing with information. As a result, the application of multimedia technology in wushu teaching can effectively overcome the inherent drawbacks of traditional teaching, and provide a strong support for the updating of teaching mode. Wushu teaching on human body flexibility, coordination, and ability to adapt higher requirements, connotation, learners are often unable to grasp wushu. Therefore, this model will often confined within the learners in the form of the surface, confined to explain static boring, the students can't get the most intuitive accessibility of education. While multimedia technology as a new teaching media, can play the same knowledge and related media presentation, knowledge feedback function, provides a new platform for wushu teaching, breaking the traditional education mode and conventional, greatly enriched the means and methods of teaching, effectively compensate for the shortcomings of traditional teaching.

Computer multimedia teaching to enhance the learner's cognitive space, increase the information content of the teaching process, through text, images, sound and other way to enrich the teaching contents, knowledge will have abstract, rigid, vivid teach learners. The application of multimedia CAI technology in other disciplines has achieved fruitful results, while the application of sports in the discipline of less, in the martial arts teaching is very rare. Because the number of wushu teaching action, action direction change, action factors more, so the difficulty of teaching; according to the characteristics of wushu teaching, using modern educational technology and teaching theory, the development of multimedia CAI courseware of wushu. Through the use of multimedia teaching, can be used in regulating the lens under the help of the demonstration action far writing, close-up, effectively from different angles on the wushu movement demonstration and explanation, break through the static image constraints, more vivid, easy to understand and accept the fast learner.

2. THE APPLICATION OF MULTIMEDIA TECHNOLOGY IN WUSHU TEACHING

2.1. Multimedia aided instruction

With the development of information technology, multimedia technology and its applications have been paid more and more attention by people. Multimedia technology has been widely used in people's work, study and life, to people's work, study and life style has had a very profound impact. The application of multimedia technology in education teaching has changed the traditional teaching idea and method, improved the teaching quality and efficiency, and promoted the realization of teaching goal. Media is the carrier of information. Multimedia is to achieve a certain goal, the use of a number of single media portfolio. Multimedia technology is based on the use of multimedia computer technology, text, image, voice and other media information
integration, and presented to the operator through a computer output device through the interface to complete a series of human-computer interaction.

- **Diversification:** The diversification of the information carrier is relative to the computer, refers to the diversification of information media. For the information received and produced mainly in five sensory space, that is, vision, hearing, touch, smell and taste, in which the first three accounted for more than 95% of the amount of information[8]. With the aid of the multi sensory information exchange, the human being can say that it is handy to deal with the information. Multimedia is to make the information of the machine processing diversification or multi-dimensional, make it in the process of information interaction, with a wider and more free space. Through the transformation, combination and processing of multi-dimensional information, can greatly enrich the performance of information and enhance the effect of.

- **Integration:** Multimedia integration is mainly manifested in two aspects, namely, the integration of multimedia information media and the integration of processing equipment. For the former, all kinds of information media may be the input or output of many channels, but should be integrated. This kind of integration includes the unified access to the information, the unified storage and organization of the multimedia information, the synthesis of the multimedia information and so on. In the latter case, a variety of multimedia devices should be integrated into one.

- **Interactive:** Multimedia interactivity will provide users with more effective control and use of information means, but also for the application to open up a wider area. Interaction can increase the attention and understanding of information, and prolong the time of information retention. When interactivity is
introduced, "activity" itself as a kind of media involved in the process of information into knowledge. With the help of activities, we can get more information and change the way we use information now. Therefore, once the interaction is given the multimedia information space, can bring a lot of role.

The multimedia teaching software in the teaching form and technique of expression than the traditional CAI software is more vivid, lively and vivid. More in line with the students to obtain knowledge of the natural form, is conducive to strengthening the understanding of teaching content. The multimedia teaching software to pay more attention to students’ initiative and actively participate in the learning process, the knowledge and information in the form of organization is conducive to students learning through exploration and discovery, which helps to overcome the shortcomings of passive traditional teaching software. At the same time, it also makes the teaching content and rhythm control in the hands of teachers, can be adjusted according to the reflection of middle school students at any time, this is the traditional television teaching can not be done.

Figure 3. Multimedia teaching system

2.2. The application of multimedia technology in the teaching of Wushu

In Wushu practice teaching, through the multimedia sound, light, color, shape, to the learner's psychological influence, to meet their strong thirst for knowledge and curiosity, to stimulate their interest in learning. Such as: the pace of learning Wushu Teaching, prior to use of multimedia projection of martial arts after the game, most students move, observe players step and process can watch the game in the pace of understanding in the best of spirits in Wushu Competition technology will play a great role, further stimulate the interest of students, enhance the initiative students.
Wushu practice teaching focus on the practice of the intuitive teaching, because the action of a large number of more complex, and the embodiment of the meaning of offense and defense, to bring a certain degree of difficulty to teaching. If we can use modern multimedia teaching technology, can be viewed as a whole at normal speed demonstration, let the student movement direction of motion, on the line, have a more comprehensive understanding; then a slow speed watch again, let the students understand the motion image, structure and details of the action, to further strengthen the memory. Because the action is completed under normal circumstances, just to slow down the playback speed, it is easy to observe the technical details, familiar with the action line, the students in mind to establish a complete concept of great help.

Before the Wushu Teaching, can be used to play VCD player, let the students to watch the high level athletes to complete the action, slow motion, decomposition action, etc.. Teachers can combine the film to explain the main points of action technology. To provide students with a complete technical concept. Use slow release or screen playback, progressive and other functions, the focus of the technical difficulties of repeated strengthening. After the students establish the correct concept, the teachers can organize the students to carry on the imitation practice. In practice, off the air at any time according to the actual situation of the students replay, slow release, review and timely, teachers can watch the students for resolution of each action. This will enable students and teachers to observe the technical details of the reproduction, fixed or decomposition of technical points, in a timely manner to correct the students in the learning process of the wrong action.

3. WUSHU MULTIMEDIA CAI COURSEWARE
3.1. Multimedia CAI courseware

The application of multimedia CAI technology in other disciplines has achieved fruitful results, while the application of sports in the discipline of less, in the martial arts teaching is very rare. Because the number of Wushu Teaching action, action direction change, action factors more, so the difficulty of teaching; according to the characteristics of Wushu Teaching, using modern educational technology and teaching theory, the development of multimedia CAI courseware of wushu. CAI multimedia courseware for meaning: their teaching ideas, including teaching objectives, content, implementation of teaching activities, teaching strategies of order, control method, computer program is described, and stored in the computer, after debugging can run the program. The function of teaching CAI courseware including stimulate students' interest in learning, to mobilize students to participate actively; expand the students knowledge; provide a variety of efficient learning path; easy review; multi direction to examine students ability; comprehensive optimization of classroom teaching.

Figure 6. CAI Multimedia Courseware

The multimedia CAI put forward a new teaching mode, it emphasizes the initiative of students in the teaching process, creating a stimulating students' interest in learning, stimulate students' desire for knowledge, to meet the students according to their individual knowledge acquisition environment, and provides a 100 tire, ready to give timely guidance to correct the wrong electronic teacher. In addition, but also take into account the courseware will be used for the teaching of physical education courseware, and through the production of calculators to complete. Therefore, the optimization teaching design and give full play to the advantages of computer software production combined with the idea, as the design of multimedia CAI courseware of the guiding ideology.

3.2. The influence of CAI on Wushu learning

Through the questionnaire to understand the students' learning interest, the effect of learning, and the students' satisfaction degree of courseware, courseware, and so on. By choosing frequency and percentage of statistics, the influence of the multimedia CAI courseware on learning interest, autonomy and enthusiasm is reflected. According to table 1, we can see that the new teaching method has a very positive role in improving students' learning interest. Autonomous learning is actually no cognitive monitoring of learning, learners can according to their own learning ability, learning task requirements, and actively adjust their learning strategies and efforts to the extent of the process. Autonomy is a very important aspect of students' learning, improve the autonomy of students can achieve the students learning method of learning content, the choice of mastery learning schedule, control knowledge, realize the distinction; at the same time, to guide the students to think independently and take the initiative to obtain information, realize the coordinated development of knowledge, ability and personality. Education believes that in the teaching process, students are the active people, they are not only the object of teaching, but also the subject of study, we must fully mobilize the enthusiasm of the students learning. To arouse students' learning enthusiasm is one of the main factors that teachers have effect on teaching. The courseware also has a greater role in improving the enthusiasm of learning.
Can be seen from table 2, the courseware to every potential action of Wushu in accordance with the actual teaching process is divided into complete demonstration, demonstration, teaching, action and decomposition analysis of the parts for preview, review after class to reproduce the teaching process, help to review technical action. This courseware through the control buttons to achieve rapid release of technical action, slow release, repeat play, speed up the key, difficult to master, in addition to the animation of the technical action analysis can deepen the understanding of the action. From the survey results can be seen, in the survey, think of Wushu action understand and grasp a very big help with 237 people, accounted for 52%, that of 194 people, the proportion of 40%, therefore, the understanding of courseware of Wushu skill and mastery help is very obvious.

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4. WUSHU TECHNICAL MOVEMENT ANALYSIS

4.1. Multimedia teaching contrast experiment

The multimedia teaching means in the teaching process, according to the characteristics of the teaching target and the teaching object, the teaching design, reasonable selection and use of modern teaching media, and combining it with traditional teaching methods, to participate in the whole teaching process, the effect of many kinds of media information to students, form the reasonable teaching process, to achieve the best teaching effect. In our school, we chose the students from 2014, 2015 elective Wushu freshman, sophomore 8 classes for the study. Randomly selected 4 classes for the experimental class, the rest of the class as the control class. The control class uses the traditional teaching mode to carry out the teaching and the experimental class is based on
the multimedia aided teaching. Due to the technical evaluation of Wushu belongs to the subjective category in the assessment project, in order to try to be fair and impartial and free teachers subjective effects, the final assessment by the other does not participate in the trial of the professional teachers in particular play. In the actual combat phase, there are more than the professional teachers as "referee" to determine the technical and tactical play of each class as a combat point.

The teaching mode of multimedia teaching is in the form of Multimedia Assisted Instruction in the teaching of the teachers' organization, the students' learning new knowledge, as well as the competition and so on. In the stage of study and practice, teachers teach students to follow the course of action, practice has multimedia to improve the students' ability to imitate and action in shaping; combat phase, guide students through the actual multimedia playing game related video or some combination, play video. The experimental results show that the control class of 120 students in the technical evaluation of the average score is 7.59, while the experimental class of 120 students with an average of 8.72 points; the combat phase, tactics, the opportunity to grasp the control class score is 7.14 points, while the experimental class is 8.63. The test results of the experimental class and the control class were obviously different. Experiments show that multimedia teaching can effectively improve the quality of Wushu class teaching and promote students' mastery of skills.

4.2. Result analysis

Multimedia teaching of "experts" in the classroom for students sparring, can greatly improve students' learning speed. In classroom teaching, the introduction of multimedia teaching. In the teaching process to play the relevant national champion, the world champion or the circle of well-known action video with classroom teaching, will make the students feel the normal degree of learning. Teachers to the students' mistakes or action does not understand a certain part in place timely corrective or reminder, will make students more impressive, learning more momentum, more enthusiasm. Multimedia teaching can greatly improve the students' sense of rhythm and coordination. The sense of rhythm and harmony is one of the most important problems in the learning phase of Wushu technology students. Although often in the face of mirror self correction and appreciation, but it is still difficult to find some of their own do not coordinate. With multimedia teaching, students can quickly keep up with the rhythm of the action in the video, the formation of subtle. Compared with the video and the mirror in their own actions, long-term practice can be very effective to promote the rhythm and coordination of learning.

Multimedia teaching can greatly improve the students' actual combat phase of the technical and tactical play. In the actual combat phase, to observe the relevant game, the combination of play or a single action video. Can overcome the classroom, the students usually lack of exercise on the usage of memory is not deep, in actual combat "free play" of the defect. Practice has proved that the classroom multimedia player can arouse students' learning interest and improve the ability of the memory. Multimedia teaching helps to improve students' ability to analyze and solve problems. In the video viewing process, you can put forward the relevant analysis and thinking of the action, causing students to discuss so as to improve the ability of students to analyze and solve problems. Can also promote the ability of students to seize the opportunity. Multimedia teaching in Wushu learning effect is obvious, can effectively improve the enthusiasm of students to learn, can promote students to master the technology. Multimedia teaching has a significant effect on improving students' academic performance.

5. CONCLUSIONS

The multimedia technology breaks through the limitation of the traditional Wushu Teaching, can improve the teaching quality, make the action of the complex Wushu technology teaching more intuitive, can greatly improve the teaching effect. The emphasis and difficulty of multimedia technology in Wushu Teaching focuses on the flexible use of outstanding technical action, through the contrast between right and wrong, correct the mistakes. Wushu technology teaching software design should pay attention to the dynamic, application, intuitive, operational and innovative. Appropriate and reasonable movement of multimedia technology, better stimulate students' interest, to facilitate students' practice, the cause of Wushu education has a very obvious benefit.

Through the investigation on the students of multimedia CAI courseware of Wushu self-study showed that the courseware to improve the students' learning interest, autonomy, initiative, Wushu technical movements and theory knowledge, improve the students' ability to solve the problems of technology and improve the efficiency of learning has a positive effect. The sports multimedia CAI courseware has the characteristics of vivid, intuitive, is a kind of teaching tool is very important in the teaching of physical education, can improve the efficiency of classroom teaching, teaching methods, teaching reform of traditional ideas, improve the students' interest in learning is of great significance and broad prospects.

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