Research on Computer Software Teaching Model in Higher Vocational Education Based on Interactive Multimedia Teaching

Liao Menghu

Wuhan Railway Vocational College of Technology, Wuhan, Hubei, China

Keywords: Interactive multimedia; higher vocational colleges; computer software; teaching mode.

Abstract: With the continuous reform and development of higher vocational education system in China, interactive multimedia model has been better applied, and also plays a better role in the whole education system. Especially in the teaching of computer software, the application of this teaching technology can significantly ensure the effectiveness of teaching, guide students to learn independently, and ensure that all kinds of knowledge can be truly mastered by students. This paper first expounds the application advantages of interactive multimedia teaching. Then, on the basis of defining the current computer software teaching in higher vocational colleges in China, it comprehensively discusses the teaching mode of computer software in higher vocational education based on the interactive multimedia teaching from four aspects: stimulating students' interest in learning, fully reflecting students' principal position, strengthening communication between teachers and students, and giving full play to the functions of electronic whiteboard.

1. Introduction

In the process of the development of information-based teaching system in our country, multimedia teaching has been widely used in all stages of education in our country. But in the long-term process, multimedia technology also shows some disadvantages. For example, some teachers blindly display the teaching contents while using multimedia, ignore the communication with students, making multimedia teaching become an Indoctrination teaching. In this case, the interactive multimedia model has been applied in all stages of education in our country, which can also better improve the problems of general multimedia teaching. According to the actual situation of computer software teaching in higher vocational colleges, this paper mainly demonstrates the specific operation of this new teaching mode from various angles, in light of guiding the innovation and development of information-based teaching mode.

2. The analysis on advantages of applying interactive multimedia teaching

Compared with the general multimedia teaching mode, interactive multimedia teaching has many advantages, and has broad application areas in higher vocational computer software teaching. Firstly, this kind of teaching mode emphasizes the interaction between teachers and students, thus promoting extensive communication between teachers and students in the specific process and better improving the final teaching effect [1]. Secondly, this kind of teaching mode is very flexible in classroom teaching, which can better show the key points and difficulties in computer software teaching, so that students can have an intuitive understanding of curriculum knowledge, and eliminate all kinds of difficulties encountered in the learning process. Thirdly, this kind of teaching mode can really put the student group in the main position of the whole teaching system, and give the students a certain degree of autonomous choice, so that they can choose the teaching content they want to learn and read. And it can improve the final teaching effect.

3. Current situations of computer software teaching in higher vocational colleges in China

Higher vocational colleges in China are important places for training skilled talents. The main purpose of computer software teaching is to cultivate students with good computer literacy. And

students can learn some software operation skills during the course, in order to improve their mastery of various software skills and improve their comprehensive quality level. However, according to the actual situation of computer software teaching in most of higher vocational colleges in our country, the teaching effect of quite a few colleges in this respect is still very limited. On the one hand, the quality of students in higher vocational colleges is relatively poor, and many students are not interested in learning [2]. The process of computer software teaching is relatively dull, thus making it difficult to stimulate students' interest in learning and ultimately making students separate from the teaching classroom. Therefore, it is difficult to achieve better teaching results. On the other hand, computer software teaching in higher vocational colleges uses limited multimedia teaching mode. It still stays in the information display of ordinary multimedia courseware, which makes students only passively receive all kinds of information in the teaching process, and ultimately leads to the transformation of multimedia teaching into an indoctrination teaching mode. So it is difficult to achieve better teaching effect. In this case, according to the current situation of computer software teaching, it is necessary to analyze the application of interactive teaching mode.

4. The analysis on computer software teaching model in higher vocational education based on interactive multimedia teaching

4.1 Stimulating students' interest in learning.

The application of interactive multimedia mode can help computer teachers in higher vocational colleges to transform complex and Abstract contents in software teaching into vivid and intuitive elements, such as images and videos, and to integrate interesting topics into the class. This way may be conducive to the whole computer software teaching system, changing the dull sense of traditional curriculum teaching, and stimulating every student's interest in learning. In order to ensure that interactive multimedia model can achieve better results, teachers should pay attention to investigating what the students are interested in during the preparation stage of curriculum teaching, and then they should integrate the contents into the corresponding courseware system [3]. When designing courseware, teachers should also pay attention to the richness of the internal elements of courseware. They should integrate texts, animation, music, video and so on into the courseware in proportion, thus fully mobilizing the multiple sensory elements of students and ultimately helping students to achieve better learning results.

4.2 Fully reflecting students' principal position.

In the interactive multimedia mode, teachers and students have equal interactive communication status. Teachers are the organizers of the whole teaching activities and the guiders of students' participation in teaching activities. Therefore, when implementing this teaching mode, teachers should also pay attention to highlighting the dominant position of students. Teachers should provide rich and colorful teaching content in the interactive interface, and display various teaching modules with pictures and texts. For students, the whole interactive interface should also leave some space for students to choose independently, so that they can actively choose the corresponding teaching content according to their learning needs and interest points. In this way, the students' psychological conflict with computer software teaching will be significantly reduced and their subjective initiative will be brought into full play in the whole teaching activities.

4.3 Strengthening communication between teachers and students.

Compared with ordinary multimedia, interactive multimedia teaching is characterized by the interaction in the teaching process, which can provide communication channels for teachers and students and strengthen the communication between them, so as to improve the final teaching effect. Considering the overall mode of interactive multimedia teaching, this kind of interaction can be divided into two aspects. First, it refers to using teaching problems to set up interaction point and leading students to discuss various problems with teachers in the teaching process. This also

requires teachers set up various problems, according to the teaching content, when making multimedia courseware. When setting the problems, teachers should choose the problems with moderate difficulty, which can not only enable students to better understand the teaching content, but also not frustrate the enthusiasm of students to participate in teaching because of the difficulties [3]. Secondly, it refers to making use of the characteristics of interactive multimedia teaching mode and letting students directly participate in the teaching design. For example, in the teaching process of office software, some students in the class have learned enough knowledge of the use of office software in high school or other ways. Therefore, teachers can consider reserving a certain degree of freedom for students with good skills in software to participate in the teaching design, or teachers directly let students explain the contents with multimedia courseware, while teachers just supplement some contents. This way can be conducive to setting up efficient interaction between teachers and students, in order to ensure the final teaching effect [4,5].

4.4 Giving full play to the functions of electronic whiteboard.

In the interactive multimedia teaching mode, the electronic whiteboard is often used, and also has become one of the important teaching tools (as shown in Figure 1). Therefore, higher vocational computer teachers should also give full play to the function of the electronic whiteboard. When using the electronic whiteboard, due to the limitation of writing area, teachers can flexibly use annotations to supplement the teaching contents, and can mark out the key and difficult points in software teaching by picture-text comparison and highlighting marks. Finally, students can intuitively understand all kinds of key and difficult points [6,7]. In addition, in the practical course of computer software teaching, teachers can also use the electronic whiteboard when using the host computer to display information on students' computers. The electronic whiteboard can be put on the side of each student's computer, and teachers input some key information to interact with students in the process of teaching, which finally can play a better teaching effect.

Figure 1 Display Figure for Use of Electronic Whiteboard

5. Conclusion

Compared with the general multimedia teaching mode, the introduction of interactive overall elements can strengthen the communication between students and teachers, and ultimately improve the teaching effectiveness. Therefore, computer software teaching in higher vocational colleges should fully clarify the importance of this teaching mode, and actively explore the key points of interactive teaching in peacetime. Each computer teacher should also introduce the interactive

points and problem points based on the software course teaching content, which can really stimulate students' interest in teaching problems and interactive content. Only in this way can the students wholeheartedly participate in the teaching activities. And the final teaching effect can be better guaranteed.

References

[1] Zhang X, Ding X. Thoughts on the evaluation of art teaching in primary and secondary schools under the interactive multimedia environment. Education Review 2018; 4:95-98.

[2] Qi J, Wang X, Yi Y, Cai X. Application of interactive multimedia programming teaching in college track and field teaching. Sichuan Sports Science 2017; 36(6):109-111.

[3] Gan L, Zhang C, Tao Z, Liu H. The application effect of interactive multimedia teaching in biochemistry experiments. Journal of Leshan Normal University 2015;30(12):81-83.

[4] Petri G, Wangenheim CG, Borgatto AF. A Large-Scale Evaluation of a Model for the Evaluation of Games for Teaching Software Engineering. IEEE/ACM International Conference on Software Engineering: Software Engineering Education & Training Track. IEEE Computer Society, 2017.

[5] Rasala R, Raab J, Proulx VK. Java power tools: model software for teaching object-oriented design. Sigcse Technical Symposium on Computer Science Education. ACM 2001.

[6] Li Z , Li JM, Guan YC, et al. Practice of Actual Project Driven Teaching Model on Software Engineering Major. Information Engineering and Computer Science, 2009. ICIECS 2009. International Conference on. IEEE, 2010.

[7] Shi B. Empirical research on feasibility and effect of computer-aided college English teaching model. International Conference on Information Engineering & Computer Science. IEEE, 2009.