Application of multimedia technologies in web-education

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Abstract. The development of multimedia technology and network technology, multimedia network training has become inevitable. Multimedia is the best means of communication, education of a society with its own characteristics. In this article, we discuss the model for teaching multimedia technologies in web education and its necessity, and also fully consider multimedia applications in web education.

1 Introduction

Dependent on multimedia network learning, closely combining multimedia computer technology and network technology, with a variety of multimedia information processing technologies, human-machine communication ability, to achieve online multimedia transmission and resource sharing, forming the ideal multimedia network environment. Since multimedia is about typing text, graphics, animation, video, sound, special effects, etc. and contains an infinite cosmic imagination, not only changes how we study and understand the issue, but also changes the way information is disseminated. With the development of the Internet and its rapid spread, modern educational technologies are undergoing a revolution. Teaching and training in the basic system of multimedia information resources, including the main function of building multimedia educational materials and managing multimedia information resources, the use of multimedia information resources, is the material basis of multimedia education in schools. Formation of student centered learning and multimedia learning environment, multimedia learning is gradually deepening.

2 Multimedia overview

2.1 Concept

New multimedia technology mainly refers to multimedia computer technology, refers to the integrated management and control of multimedia information, including text, graphics, animation, moving pictures, etc., as well as to establish a logical connection of information, and whether "interaction" will be included System function. This is a completely different

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traditional simple combination of multimedia technologies. Computer multimedia technology, integrating the digital signal audiovisual information system, then can easily store, manipulate, control, edit and transform even queries and checks? People can describe, publish and deal with different types of audiovisual materials using multimedia technology, images of nature, have more participation and creativity.

2.2 features of the new multimedia

- Integration. Various symbols of the multimedia integration system, characteristics, this characteristic is different from the past or complex monotonous multimedia symbols system. In other words, multimedia technology is not an overlap of symbolic systems, but a general integration.

- Non-linear characteristics Non-linear. Multimedia technology will change the format of the read and write sequence model. In the past, the method of reading and writing people is usually known chapters, sections, pages, and acquiring knowledge step by step, and multimedia technologies will involve the hypertext linking method, which allows the content to be displayed to the reader in a more flexible and modifiable manner.

- In real time. audio, motion video, animation in multimedia information are closely related to time, and the integrated process of their presentation and interactivity is carried out in real time. When one of the main content is displayed, its audiovisual information is synchronous.

- Edit ability. The key multimedia technology is digital compression and decompression technology. Digital information is easy to copy and modify, including audio (language, sound), graphics (static and dynamic), text, and so on, which can be flexibly edited using digital compression.

- Ease of use of information. Users can use the information in accordance with their needs, interests, task requirements, preferences and cognitive characteristics, as well as freely use graphics, text, audio and other information forms.

3 The multimedia network learning model

The learning mode and adaptation to the theory of constructivist learning in a multimedia networked environment can be summarized as follows: for students as a center, throughout the learning process, educator as organizer, educator, help and service providers, the use of a multimedia networked environment of resources through collaborative learning, students fully disclose their initiative, enthusiasm and entrepreneurial spirit, and make students effective ways to achieve the goal of building implementation, which means what they have learned. In this model, learners have a positive knowledge constructor value. In knowledge, the content of materials is provided not only for the teacher, but also for the students of the object of the tectonic initiative. Multimedia networking is not only a way and means to help educators share knowledge, but also a tool used to create environments and collaborative learning. The basic model of multimedia web education is divided into the following categories: First, explain the demo model based on the multimedia classroom [1, 2]. This teaching model, makes the traditional teaching multimedia network educational process, the teacher closely integrated the educational content in accordance with the teaching goal, puts forward a multimedia system of various types of educational content through courses, graphics, animation, video and sound form, vivid images. Students understand these vivid perceptual materials and formulate appropriate feedback. In this model, according to the learning needs, educators can supplement these extracurricular materials to save time when writing on the blackboard, increase the amount of information, and the learning focus can be repeated to improve the learning effect.

Secondly, based on the offline learning mode via the Internet. In accordance with the goal of teaching, the teacher must provide students with a large amount of training and study of information resources by these students in accordance with his actual conditions, solve the learning problems, choose the study of the content and method of his own teaching. Students can also practice over the network many times to solidify their knowledge and skills. Meanwhile, a computer with auto-correction can also work with feedback, timely training as a result of pressure reduces the role of teacher-inspector. In this model, if a student encounters difficulties, he can discuss with teachers or classmates by email or instant messaging chat, solve problems in a timely manner, and teachers can collect more feedback from students.

Thirdly, joint training on different tasks. In accordance with the teaching purpose, the design of teaching content to meet the various characteristics of the tasks is distributed to teachers and students through student network packages. Students in the implementation of the educational task through positive cooperation, mutual communication, learn from each other and mutual influence and inspiration, knowledge, methods and skills in this process. Educators can join the target group and guide students, as well as supervise and supervise the process of collaboration among high school students.

4 The effectiveness of training with the use of Multimedia technology

First, the use of multimedia technology can stimulate student interest in learning. The use of multimedia technologies through innovative imaging, dynamic displays, rich films and wireless transmission of data changes passive "listening", "recording", "active" observation ", so that it can generate interest in students in learning, and students, as a rule, have a positive tendency towards learning the content, aroused warmth and lasting emotion. Thus, students think positively and have the courage to express their views and actively participate in the classroom. This is true as a student-centered presentation and student development as a fundamental innovative educational thought ...

Second, timely forward learning feedback depends on the ability to harness human-machine interaction. Computer multimedia, how effective a class is can only be found through teacher feedback. Thanks to computer software and a powerful interactive human-machine function for the development of multimedia network technologies, teachers and students in the process of teaching and learning receive feedback from the teacher at any time, and teachers can study the effect of the learning. If you practice my report a lot in the classroom, educators can know the results of each heading, in real time help students identify the causes of the error. Even if testing students earn a Master's degree in Professional Knowledge, they can also implement curriculum software [3].

Third, the development of students' creative thinking in teaching multimedia network. In web education, educators use creative learning strategies, build a new learning model that is student-centered, student-centered independent research activity, teaching-centered, teaching as the main body, suspicion of a spindle, researching the main line, so that the learning activity is based on self-study of students, self-exploration and, thus, contributes to the formation of the teaching and learning environment of students' creative thinking abilities. Fourth, an ideal learning environment is created for self-study of students using media technologies. The constructivist theory assumes that human learning is not a simple transfer of external things or the human cognitive structure of the initial beginning, but the construction of values that are established step by step for external things in the process of human interaction with external things. It emphasizes the active learning process of students, learning autonomy and student innovation. Constructivist learning theory suggests that "situation," "cooperation," "conversation," and "meaning-making" are the four elements or properties that make up learners' self-learning.

5 The need for multimedia learning on the web

Currently, there are many different types of educational media, the characteristics and characteristics of which differ, and the characteristics of the educational content have certain limitations, which means that no medium can face the entire learning process well. As a full classroom training, it often consists of several core training activities. If one type of media delivery does not meet the requirements, you can supplement with another medium. Therefore, it is necessary to optimize teaching and learning tools with different performance in order to avoid weak points in the learning process, apply interactively and harmonize the learning efficiency. In short, according to the needs of student characteristics, characteristics of educators, learning content and learning objectives, various media are combined and show their length, complement and reinforce each other to form an optimized learning media group for conveying learning information, and various media. joint participation in the learning process to achieve optimal results [4].

6 Multimedia teaching is an inevitable trend in the development of school education

Modern society is an era of explosion and expansion of knowledge, and the rapid development of information and the rapid renewal of knowledge require us to keep up with the constant improvement of our own qualities. Online education uses modern information technology as a principle of innovative learning, and now students have a great interest in the computer, so they will not resist it. In the group, the interests of the students increase, and the enthusiasm for learning increases, and therefore they become more active and conscious. Networked learning can make students think, so the answers are different, which can stimulate students' creativity in full alignment with the requirements of networked learning [5,6].

We advocate an "innovative learning environment within the network", which means network-style classes while discussing a multimedia mix. Multimedia classes include a broader range of knowledge that can mobilize student enthusiasm, in contrast to traditional education, which is limited to very limited knowledge of books, and it more fully reflects the breadth and ease of use of multimedia technologies [7]. Because of the simple and fast transfer of information in the learning process, classroom learning includes high content and broad pedagogical knowledge that helps students to improve the strength and breadth of knowledge in order to achieve the ultimate goal of improving teaching. qualitative. Finally, an extensive network of information resources, superior multimedia capabilities and multi-interactive function offer the opportunity to improve the quality and effectiveness of teaching. We are facing an era of highly informative education, and multimedia learning is a time necessity and an inevitable choice for schooling [8,9].

Conclusion

Multimedia technology is one of the most popular technologies at the turn of the century. It promotes teaching reform and improves the quality and effectiveness of teaching. The use of multimedia in teaching is a major component of educational modernization, as well as a breakthrough in the overall reform of teaching. The article first presents the concept of multimedia technology and its main characteristics, and then outlines the advantages of multimedia technologies in teaching, the transformation of educational modes after the application of multimedia technologies, multimedia teaching methods and changing the

requirements of teachers and teachers. students. We offer our thoughts and points to pay attention to when using multimedia multimedia technologies in teaching.

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