Planning and Design for the History of Distance Education Platform Based on VRML

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Abstract. Modern distance education is a kind of new education method combining with modern information technical development; it has already become the trend with the international education development. In this paper, the history of distance education platform in order to improve the existing status quo boring of history teaching methods and the history of distance education platform that is based on J2EE and VRML was Planning and design.

Keywords: Component, Formatting, Style.

Introduction

Modern distance education is a new type of education with the development of modern information technology to produce, and it has become a common trend in international education development. Distance education platform is the basis for the implementation of distance education; it is the foundation of a platform supported by a plurality of sub-platform. These sub-platform covering all aspects of distance education, performance and functionality will determine the methods, means, effectiveness and quality of distance education. Therefore, the results of the latest information technologies applied to distance education, building a strong, stable performance, practical distance learning platform for distance education is a long-term development goals and tasks.

Currently, distance education is to build the knowledge age people the main means of lifelong learning systems for different industries, different educational backgrounds of people anywhere in the self-learning has created favorable conditions for lifelong education and popularization opened up broad prospects. With the continuous development of network and communication technologies and information technology, distance education will build a lifelong learning system ideal for people of knowledge economy era.

Distance education experience in the course of development of the three phases. The first phase of distance education from the mid-19th century correspondence education.
postal communications and printing technology as the representative. Distance education second stage is to start from the beginning of the 20th century radio and television education, radio, television, audio and video recording, phone fax and other media for the technical representative. Distance education in the third stage from the 1990s began to distance education (what we call the modern distance education refers to the third stage distance education), computer network and multimedia technology as the representative. In the process of the development of distance education, which the transmission of information and student exchange patterns are changing.

**Effect of Instructional Design Theory of Network Teaching Platform Design**

With the application of network teaching platform in teaching, instructional design processes and methods have changed, that the application of network technology in the education system so that some of the teaching concept of avant-garde art it possible to achieve such acceptance and instructional design theory applications possible, while modern instructional design theory of network teaching platform put forward many new requirements.

The modular design concept of teaching content. Dick - Cali classic instructional design system based on the results of teaching evaluation model requires constant revision of teaching design, the teaching content must be broken down into a sequence of modules, each module has its own teaching tasks and teaching objectives, students should be prescribed completed within teaching time to learn and get evaluated, so as to make immediate correction possible.

It provides a wealth of teaching resources and a wealth of teaching methods. Teachers and textbooks are not the only source of students to gain knowledge; students acquire knowledge through the network teaching platform for students to provide a messaging environment. At the same time different students have different needs, network teaching platform to take a variety of forms of teaching and teaching strategies may provide.

Provide an efficient way of teaching evaluation. Evaluation of teaching is teaching design and implementation of post-critical aspect to examine the effectiveness of the teaching process, and provide the basis for the next stage of design modifications teaching, teachers track student learning behavior by recording, analyzing unit test results, the quality of homework before entering the next phase of the timely completion of the correction of instructional design, or the correction will lose its significance.

For teachers and students. Now that is service education, distance education is no exception, but also to compensate for distance education teachers and quasi-isolated defect, the process of teaching teachers and students of the degree of support services directly affect the effectiveness of teaching, through the network teaching platform, so that students feel support services readily available, everywhere, so that teachers in front of students, to help come in handy.

Focus on teaching and learning process. Teaching and learning process for teachers and students to explore the process of knowledge, the formation of detection is to examine the effect of the teaching process, in this process, teachers and students to ensure the smooth flow of communication, timely performance of students continued encouragement and support, stimulate students’ intrinsic motivation and lasting. Network teaching platform to ensure the continuity of the teaching process, keep track of the learning process, to achieve real-time monitoring and timely feedback.
Provide personalized learning environment. From the viewpoint of individualized teaching process point of view the process of teaching, teaching is a showcase activities, learning is a process of obtaining meaningful activity. Network teaching platform as an important factor in student learning in the external environment, you must create the right environment for the external environment within the different students, the students get the most out of teaching through a participatory process. It offers a variety of learning styles in this network teaching platform environment.

From the perspective of modern education, the education is to evaluate all aspects of teaching school all-round, three-dimensional, comprehensive evaluation; and evaluation of teaching is based on certain narrowly defined goals and standards of teaching, for teachers to teach and students learn the system to detect and determine its value and the advantages and disadvantages, in order to improve the process. So teaching evaluation is an important part of the teaching process. At the same time due to the development of educational theory, teaching methods and teaching methods, such teaching evaluation objectives and targets it has undergone great changes.

**Brief History of Modern Distance Education Knowledge**

Compared with developed countries, China's modern history, knowledge of distance education started late, poor infrastructure conditions. In just a few years from scratch and has made considerable progress. Especially in the study of virtual reality technology and distance education combined with historical knowledge, but also get the attention it deserves. Currently, there are some colleges and universities have been initially established a remote virtual laboratory. Such as: Tsinghua University, using virtual instrument built car engine detection system; School of Mechanical Engineering, Huazhong University of Science Testing Laboratory Virtual Laboratory results of its public display on the Internet for distance education using historical knowledge; Sichuan Union University, based on virtual instrument design, development of the "second-tier aviation radio comprehensive test instrument"; Fudan
University, Shanghai Jiaotong University, Jinan University and a number of colleges and universities, has also developed a number of new virtual instrument system for teaching and research.

From the current research, our country's modern history, knowledge of distance education platform in terms of technical measures, still there are some problems in the architecture, such as: lack of standards, poor interaction, personalization is not strong, the system capacity of small-scale, low repeated and serious level of development. For virtual reality system studies have focused on the hardware interfaces, as well as image processing algorithm description for VRML of research also more simple three main display, combined with little background database.

The definition and characteristics of virtual reality

Virtual reality (virtualReality, VR) is a computable information based immersive interactive environment, specifically, the use of computer technology as the core of modern high-tech generate realistic visual, auditory, tactile specific range of virtual integration environment, the user with the necessary equipment in a natural way with the virtual objects in the environment interact and influence each other, resulting in a real environment equivalent person's feelings and experiences. It is highly developed computer technology in various fields of application of the process of crystallization and reflect not only include graphics, image processing, pattern recognition, network technology, parallel processing technology, artificial intelligence and other high-performance computing technology, but also involves mathematics, physical, communication, and even associated with weather, geography, aesthetics, psychology and sociology.

Real blur is one of the mapping to real world space multidimensional information space, including the basic model building, space tracking, sound localization, tracking and visual viewpoint sensors and other key technologies make realistic virtual world generated, virtual environment Get to user actions to detect and manipulate the data as possible. Specifically, it is mainly to build technical, space tracking technology, voice tracking technology, visual tracking and sensor technology point of view based on the basic model.

A virtual object is the real means to ensure that users get the same as or similar to the real environment from a visual virtual environment, the key technology of hearing, haptic and tactile and other sensory perception. Participants can produce immersive key factors in addition to visual and auditory perception, but also includes a user can manipulate virtual objects in the same time, feel the reaction force of virtual objects, resulting in a tactile and haptic perception. Haptic feedback gloves perceived mainly by the computer by force, force feedback joystick finger in motion damping allowing users to feel the force of the direction and magnitude. Tactile feedback is the main vision, a sense of pressure, vibration, touch, feel and electronic nerve, muscle and other simulation-based approach to achieve.

High-performance computing technology includes data conversion and data pre-processing technology; real-time, realistic graphics image generation and display technology: a variety of sound synthesis and sound space technology; integration of multi-dimensional information data, data compression, and generate the database; including command recognition, pattern recognition, speech recognition, and detection of gestures and facial expressions of people's information, including; distributed and parallel computing, and high-speed, large-scale remote network technology.

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In order to play these advantages editing software, we can in the actual modeling process according to the actual situation, combined with the use of three modeling methods. Since the model of virtual classrooms and virtual laboratories in many more complex material, directly written in VRML language code line by line to finish is very difficult, so we use professional 3D modeling software 3DSMax modeled after the import of modified CosmoworldS, error correction appears exported, modification reduces the file, add interactivity. Finally, the optimization and improvement in Vrmlpad.

Summary

It can be seen through functional testing use cases, the history of educational resources management system in line with the platform "educational resource construction specifications," a standard, scientific, teaching, technical, and regulatory and other characteristics. Teaching video module to achieve a good adaptive strategy video playback, playback speed and stability, clear picture quality, designed to meet the requirements of the player can actually use. VRML using virtual classrooms constructed to achieve some browsing and interactive teaching and learning environment; virtual experiments can be part of virtual laboratory equipment, and has a certain degree of interactivity. In addition, the entire platform role access control policies, permissions different roles were limited. Due to time constraints and personal relationship between the ability to create a virtual classroom platform only virtual experiments and the most basic functions, and the need for further improvement and optimization. In addition, an instructional video module for the teaching of history related video, audio, and courseware synchronization and transmission problems, this paper does not do in-depth study and discussion.

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