Research of Education Technology based on Information Technology

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Abstract: Education informatization is an important part of China's education reform and development. At present, the development of education informatization in China is in the stage of important strategic opportunities. Objectively evaluating the development level of education informatization in China has important practical significance for accurately grasping the focus of follow-up work. Based on the national education development strategy demand and its clear requirements for the core indicators of education informationization, this research aims to propose a set of macro-general education informationization core index system, in order to provide a scientific, reliable and practical basis for evaluation for the healthy and sustainable development of education informationization in China. Through domestic and foreign literature research, it aims to refine important indicators, analyze the policy development of new development indicators, after several rounds of expert survey feedback, form a core five-dimensional index system including infrastructure, digital education resources, teaching and learning applications, management information, and security system.

1. Introduction

The educational informatization development index system is an important means to evaluate the development level of China's education informatization, and it is a fundamental issue in the process of education informatization policy formulation and development strategy research. Establishing a scientific and rational information development index system is of great significance for accurately assessing the development level of education informationization and scientifically guiding the subsequent development direction. In view of this, many organizations and research groups at home and abroad have made the research on the evaluation index system of educational information development as the key research content in the field of education informationization. This paper analyzes the domestic and foreign research literature on the evaluation index and evaluation system of educational informatization development indicators, and on the basis of the empirical research on education informatization, based on the principles of macro-generality, scientific dynamics, and collectable statistics. The five core elements of education informationization, such as educational information infrastructure, digital education resources, teaching and learning application, management informationization and guarantee mechanism, are the basic frameworks, integrating relevant national education informationization policies and regulations and international and domestic educational informationization development indicators. Study the context and put forward the core index system for the development of educational information.

2. Characteristics of information education

Multi-media teaching materials: Multi-media teaching materials use multimedia, especially hyper-media technology, to establish a structured, dynamic, and visual representation of teaching content. More and more textbooks and reference books have become multimedia. They not only contain text and graphics, but also present three-dimensional images of sound, animation, video and simulation. For example, there is a multimedia learning software for English vocabulary. There is a picture that compiles commonly used action nouns and pictures together. When you choose; 0 chases <word, the computer will tell you "chasing" by voice. Behind someone or something 8 (0 running < means, if you click on the screen of two children, they will run fast; if you still want to

know the exact meaning of running, you are again", The computer will present the sound commentary and animation about". In such multimedia learning materials, there seems to be an invisible chain between the pictures in series. This invisible chain is called a super chain. This kind of multimedia with hyperlinks is also called hypermedia. As the saying goes, books are dead and people are alive. But with the hypermedia "e-book", the era of living dead books will never return, because the multimedia textbook itself is a living book. How to design a "living book"? How to learn "living books"? This is a new problem faced by teachers and students in the information age.

Globalization of resources: Using the Internet, especially, the educational resources of the world can be connected into an information ocean for the majority of educational users to share. There are many types of educational resources on the Internet, including educational websites, e-books, virtual libraries, virtual software libraries, newsgroups, and so on. For China's education, a major problem is the serious shortage of online Chinese information resources. The development of online educational resources is not only the task of the education sector, but also the obligations of all sectors of society and knowledge workers. The online basic education resource system in the United States is built on the concerted efforts of all sectors of society.

Teaching Personalization: The intelligent tutor system built with artificial intelligence technology can teach and provide help according to different personality characteristics and needs of students. In order to do this, the measurement of student personality, especially the detection of cognitive style, will become an important research topic in educational research.

Learning autonomy: As the educational thoughts of students as the main body are increasingly recognized, the use of information technology to support independent learning has become an inevitable development trend. In fact, electronic textbooks such as hypertext-hypermedia have provided extremely convenient conditions for autonomous learning.

3. Education Informatization Evaluation Indicators

The statistical evaluation indicators of the development level of education informatization in China can be analyzed from two dimensions, including the specific development of various types of education informatization and the common development elements of educational informatization. From the perspective of the specific development dimensions of various types of education informatization at all levels, the informatization development goals and priorities of basic education, vocational education, higher education and continuing education are different. From the perspective of the common development elements of education informationization, there are similarities in various aspects of education in information infrastructure, digital resources, teaching applications, management informationization, and safeguard measures. Therefore, schools at all levels and schools have some common and common goals in the development of educational informationization, such as improving the level of information infrastructure, strengthening the construction of campus networks, developing digital teaching resources, software tools, etc., enhancing their level of joint construction and sharing, and upgrading students. Informatization learning ability and teacher informationization teaching level. In addition, vigorously promoting the informatization of education management is a powerful means for all schools to improve management efficiency. In order to ensure the sustainable and healthy development of education information, schools at all levels must provide support from management mechanisms, organizational leadership, and capital investment.

The design of specific indicators needs to consider the convenience of data collection of the indicators, and it is convenient to conduct classification and statistics according to various educational management institutions and schools of all levels, and to link with relevant statistical data as much as possible. For example, the "China Education Statistics Yearbook" and the "National Education Development Statistics Bulletin" have collected statistics on relevant indicators, and the indicator data can be compared horizontally and vertically. There are many related indicators of the core elements of education informatization development. Based on the comprehensive and comprehensive nature, this study tries to select fewer representative core indicators and tries to reflect the overall development of education informatization with the minimum number of

indicators. The description of each indicator is quantified as much as possible, making the indicator data easy to collect, count and compare. The informatization learning ability of students is an important indicator reflecting students' application of information technology in the learning process and improving their learning ability. It is a typical embodiment of information technology to enhance students' informatization learning ability and the ability to survive and develop in the information age. Students in the 21st century must have basic information literacy, including effective use of ICT research and access to information, critical assessment of information, and creative processing and application of information. "Education Informatization Planning" takes "cultivating students' learning ability in the information environment" as an important task, and focuses on cultivating students' ability to solve problems under the network environment. Therefore, the students' informatization learning ability and the teacher's informatization teaching ability are important reference factors for measuring the ability of "people" in the information environment, and it is necessary to be included as a new indicator.

4. Response to education informationization

Education informatization shows us the bright future of education. However, we must be soberly aware that the application of information technology will not naturally create educational miracles. It may promote educational innovation and may also strengthen traditional education because the social role of any technology depends on its users. Our view is that educational technology has changed and teaching methods have changed accordingly. The choice of teaching methods is governed by the teacher's educational concept. If information technology is a powerful wand, then the teacher is the magician who manipulates this wand. Therefore, it is very necessary for the majority of teachers in our country to face the rapid wave of education informationization, recognize the general direction of education reform, update educational concepts, and know how to use information technology to support education reform and promote education development.

First, we should fully understand the role of modern computer-based information technology in education. When people used computer-assisted instruction in the early days, the first direct idea was to let the computer act as a mentor and develop a later intelligent mentor system from procedural teaching. MIT's 54 678) Professor made a very different opinion. He thought that the computer should be allowed to play the role of the student, and the student should be a teacher to teach the computer to do things, and designed a graphic suitable for children. The programming language enables children to start from the use of this language to direct computer graphics painting, and gradually enter the abstract hall of programming. Since the computer can be a teacher and a student, why not be a companion of the peers? Now that there is a virtual partner system, you can learn from each other. The computer can also act as an assistant to teachers and students, such as finding and organizing materials, proxying communications, reminding transaction schedules, and more. These can be used as anthropomorphic role in information technology.

What is the role of information technology in educational change and I think it can be analyzed in two ways. On the one hand, because of the wide application of information technology in various fields of society, the multi-source, optional and accessible information is available, and students can easily obtain a large amount of information, which weakens the authority of educators. This forces educators to take two gestures: one is to tend to a more democratic education model, and the other is that educators themselves have to use information to strengthen themselves. This is a gesture of adapting to educational change under the stimulation of information technology. On the other hand, it is trying to find a way to change education in the light of dissatisfaction with the current state of education. One of the ideas is to believe that modern information technology can become a powerful support force for contemporary education reform. This is a gesture of using information technology to seek educational change. Adapting to change and seeking change represent two quite different gestures. Of course, in most cases, these two gestures are intertwined.

5. Conclusion

This paper proposes a set of educational informationization index system from the macroscopic perspective, but it needs more relevant empirical research afterwards. For example, it collects accurate and reliable empirical data of China's education informationization from the front line of education, and based on a large amount of data, it is used for educational informationization. Carry out statistical analysis of various development factors, understand the information construction and development of education in different regions, clarify the mutual influence characteristics of various types of educational informatization development, and provide new ideas for further research and application of regional education informatization development assessment. On the basis of analyzing the national data of education informatization, it also deeply explores the practical problems and development approaches of the development of education informatization in China, thus providing decision support for the national education informatization macro policy, and providing evaluation for the development of educational informatization. Scientific reference.

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