The Application of Artificial Intelligence Technology in Computer Network Teaching

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Abstract: With the development of information technology and the widespread popularity of the Internet, people's educational concepts are quietly changing. New educational models are taking shape, and computer network distance education is developing rapidly. However, due to the immature development of computer network distance education, there are many practical applications. The problem, and the introduction of artificial intelligence technology, has raised the level of computer network education to a new level of development and demonstrated its broad development prospects. This paper analyzes the application of artificial intelligence technology in computer network education.

1. Introduction

With the advent of the network era, the application of network technology in teaching has become more and more extensive and in-depth, especially when the campus network is connected with the internet; it provides great convenience and richer resources for teaching. The main research topic today is how to make more effective use of existing online resources. Specifically, it is to develop an internet-based network teaching system and build an auxiliary teaching mode based on the network teaching system. The network teaching system can effectively integrate modern network technology with computer-assisted teaching, and produce a novel teaching mode. This teaching mode can break through the tradition, the teacher fixes the time and space constraints, and makes full use of the advantages of the internet to make students Produce active learning and give the whole teaching process to the students [1]. Under the guidance of the teachers, students can carry out exploratory and autonomous learning to improve their enthusiasm and autonomy. This is a great step forward for human exploration in teaching mode.

Artificial Intelligence is a discipline that studies the thinking process and intelligent behavior of computer simulation of human learning, reasoning, thinking, planning, etc. It has used the research on the principle of computer intelligence to create a computer similar to human brain intelligence. Enable computers to achieve higher levels of application. With the development of information technology and the widespread popularity of the Internet, people's educational concepts are quietly changing. New educational models are taking shape, and computer network distance education is developing rapidly. However, due to the immature development of computer network distance education, there are many practical applications. The problem, and the introduction of artificial intelligence, has raised the level of computer network education to a new level of development, and has shown its broad development prospects [1].

2. The development history and development direction of computer artificial intelligence technology

2.1 Overview of artificial intelligence technology.

Artificial intelligence is the use of computers to embody and simulate human intelligent behavior by studying human intelligence mechanisms and thinking processes. Artificial intelligence has achieved rapid development in just a few decades since its official launch, and has become a mature

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tool. Because the utility of artificial intelligence is comparable to human intelligence, speech recognition can be adopted in the process of information analysis and processing, and human-machine dialogue is realized. Therefore, its application scope has gradually expanded to many fields since its development, such as medicine, architecture, geology, Machinery, etc., and its research topics are also deepening, such as expert systems, robots, natural language processing systems, games, and so on. Artificial intelligence has the ability to understand and learn from, to discern ambiguous or contradictory information, to respond quickly and successfully to new environments, to use reasoning to effectively decline when solving problems, to handle complex situations, to apply knowledge control environments, etc. Many abilities. Artificial intelligence is a knowledge information system. Knowledge plays an important role in artificial intelligence [2].

The intelligence of a computer can only be revealed through the discovery, storage, learning, reasoning and decision-making of knowledge. Artificial intelligence mainly has the following advantages: First, because knowledge storage and computer systems bring great convenience to people's knowledge dissemination and replication, the development of computer network technology makes knowledge dissemination and replication break through time and space constraints. Bring unlimited knowledge sharing to people. Secondly, the artificial intelligence system expands the access to knowledge information, and at the same time, the ability of artificial intelligence to display amazing quality and speed in the processing of certain tasks is far from what humans can do it [2].

2.2 Development path.

1) In the rise phase, in the 1950s, the concept of computer artificial intelligence first appeared. Many scholars carried out systematic analysis and research on this new technology, and obtained some research results with reference value, for example, machine theorem Proof, etc., not only that, but some theoretical knowledge has also made a lot of support for this. For example, a simple modification rule described by Donald laid the foundation for modifying the strength between neurons [3]. It is true that artificial intelligence technology has achieved certain development at this stage. However, due to the wide range of disciplines involved in artificial intelligence technology, the development of various disciplines is not synchronized, and it is difficult to provide support for the further development of this technology. Not only that, but also some solutions the reasoning ability is not high. Therefore, the development of artificial intelligence technology is not optimistic at the rising stage.

2) In the application stage, in the 1970s, after the concept of knowledge engineering was put forward, commercialization expert systems and intelligent systems emerged as the times require, and they were promoted worldwide, creating more value in related fields, due to the expert system itself. There are certain limitations, making artificial intelligence technology once again facing challenges [2].

3) In the integration phase, with the continuous development of various disciplines, the expert system has been further improved, and actively combined with other functions, such as intelligent language, multiple knowledge representation methods, etc., to create more functions. In recent years, computer artificial intelligence technology has gradually begun to develop toward parallel reasoning and multi-expert synergy systems [3]. However, we also have to admit that computer artificial technology is not perfect in theory, method and technology, and is still in the development stage.

2.3 Future development direction.

As a comprehensive technology, computer artificial intelligence technology has great development potential. Based on the development of technology, in the future, artificial intelligence technology will develop towards fuzzy processing, parallelization and neural network [4]. First, automatic reasoning, as the most critical research direction, is based on the combination of computer and artificial intelligence, which is mainly based on the dynamic characteristics of the system. Secondly, the intelligent interface is mainly to realize people and computers. The application created by communication has provided great support for people's work and life, and has a high application mechanism. Based on this, how to better improve the intelligent interface has become a research topic, finally, data mining, as the most high-profile topic. It is mainly to study the knowledge discovery

system that base on the database, and to use reasonable methods to obtain knowledge from the data, and then find the internal connection and law of the objective world, so as to achieve the automatic acquisition of knowledge. Therefore, computer artificial intelligence technology will bring more surprises to the development of human society.

3. Computer network education

In the 21st century, as the information age, the development of information technology has advanced rapidly, and the construction of the Internet has become an important tool to connect the world economy and culture. Traditional concepts have gradually been eliminated by society, and more and more lifestyles and education methods continue to Changing our production and life, the Internet has become an indispensable tool for people's lives [5]. In the new century, in order to meet the needs of cultivating new talents in the new era, various new types of education models have gradually been promoted, for example, computer network education that we are now familiar with.

At present, in the education sector in China, the cultivation of people's theories and skills relies on all kinds of higher vocational colleges and universities, and the traditional face-to-face teaching of traditional teachers and students is the mainstay. Compared with computer network education, although this kind of education method is better, it can cultivate all kinds of talents more systematically, more standardized, and more perfect. However, the investment in education is too high. In the cultivation of talents and the proportion of investment in education, education investment is too large [3]. The benefits are not high, and subject to time and space constraints, new types of education for all and lifelong education cannot be promoted, and the flexibility of education methods is very poor.

This is also the case. Computer network education has been regarded as an important practice method for education for all and lifelong education. Due to its extensiveness, convenience and revolution, it has been greatly promoted. To put it simply, computer network education overcomes the limitations of traditional education on talent cultivation [1]. It can access resources and learn through the Internet anytime and anywhere, and as an emerging technology, people are curious about it. Conversely, curiosity the motivation of people to learn and understand can help people learn and supplement, but in the same way, the two sides of things determine the same flaws in computer network education.

4. Problems in current computer network education

In our daily computer network education, there are still various problems in the actual application, for example:

1) If the Internet is used as a tool to connect the world, then the computer is a window for people from all over the world to interact and interact. This window has various operating systems, and various operating systems have different versions. In application, computer network education has defects in the support of various versions of various systems, it is difficult to fully reflect its own content on the "window", and computer network education itself is very helpful for students' guidance and answering methods [2]. Behind, limited by many students, fewer teachers, hardware and other issues, cannot answer the doubts of students in one mind, it is difficult to take the initiative to complete the education for students.

2) Computer network teaching is too scattered in space, and it is too fragmented in time. It is difficult to systematically complete the education and training of students, the computer network education has poor autonomy and portability, and it is implemented in specific implementation. It is difficult to achieve the difference between the theoretical and traditional education.

3) Computer network education can be said to be an open education, which guarantees the fairness of everyone in learning [3]. However, computer network education is difficult to solve the results of student training, unlike the traditional test. The guarantee of objectivity and notarization, and the result of certification is authoritative. Computer network education cannot clearly determine the result of education because of its own characteristics, and it cannot guarantee the fairness and

objectivity of post-education examination. The society is also difficult to recognize the results of computer network education.

4) Computer-aided teaching system is a simple support system for computer network education. It is not fully adapted to the needs of computer network education. A large number of courseware's are primary level slides or web pages composed of pictures and texts, although there are some online teaching methods that use video, but the content of the course is not updated. The computer network education that students often accept cannot be done in real time [4]. The Internet is a fast-changing technology, but Internet education does not.

5. Application of artificial intelligence technology in computer network education

The hypermedia system has an ideal teaching environment, which is easy to stimulate students' interest in learning and initiative, but it cannot guarantee the expected learning objectives. Moreover, because they do not understand the objects to be taught, they cannot provide targeted guidance and cannot teach students in accordance with their aptitude. . The intelligent assistant teaching system is just the opposite. By combining the two, we can achieve complementary performance and research to produce a new generation of high-performance intelligent hypermedia teaching system.

Intelligent decision support system. The Intelligent Decision Support System (Intelligent Decision Support System) is a product of the combination of decision support systems and artificial intelligence, and its application in the field of network education shows broad development prospects. The application of the intelligent decision support system in the digital library makes the decision objectives and problem identification more clear, helping decision makers to establish a sound decision model, providing a variety of alternatives, and selecting various options at the same time. , optimization, comparison, analysis, so that decision makers' decisions are more accurate and effective [3].

Intelligent decision support system. Intelligent decision-making system is the application of artificial intelligence technology in computer network education. It can effectively help decision-makers to provide decision-making demand data, as well as various types of information and even background materials, helping decision-makers to clearly define the goals of various types of teaching, and intelligent decision-making. The support system can construct different decision-making models through analysis of various types of information, provide multiple educational programs for teaching, greatly reduce unnecessary time for students and teachers, and improve the efficiency of teaching [5]. At present, intelligent decision-making systems are already in computer education. It shows a strong potential and prospects, so in the application of artificial intelligence in computer network education, we must deeply understand the use of its help decision-making.

Intelligent guidance system. The Intelligent Induct-learning System is an important part of Hyundai's continued Anji network education system and is the guarantee for computer network education projects. Through the intelligent guidance system, students can provide a good learning environment and quickly access the various resources they need, so that learners can get the full service of learning, and then achieve the success of learning [5]. The intelligent guidance system of intelligent agent technology can formulate a guiding strategy in line with the students' actual situation according to the specific conditions of students, and provide personalized and targeted services for students. Under this kind of guiding strategy, the system not only can automatically generate various problems and solutions, but also can reasonably plan and adjust the learning content and progress. At the same time, it can correct the guiding strategy in time for the information feedback content, making the guiding strategy more reasonable and scientific [4].

Intelligent teaching expert system. Intelligent teaching expert system (ITES) is the main direction of traditional CAI system steering. It is an open interactive teaching system. Using intelligent teaching expert system to simulate the teaching thinking of experts. To provide a good intelligent environment for teaching [6]. On the one hand, students can acquire knowledge through the intelligent expert system. On the other hand, the intelligent teaching expert system can carry out knowledge transfer according to the specific actual situation of the students (including knowledge

reserve, ability, learning style, etc.), so that the teaching effect is greatly improved. In the intelligent teaching expert system, intelligent computer-aided teaching plays an important role, with the following intelligence [6]. First, automatically generate various problems and exercises, and form problem solutions based on the understanding of teaching content, while also automatically generating and understanding Natural language. Secondly, according to the actual situation of the students, the students can make reasonable adjustments to the learning content and teaching progress, and have the ability to explain and consult the teaching content; again, they can judge the students' mistakes and evaluate the students' learning behaviors. In addition, help student's correct mistakes while improving their teaching strategies.

6. Conclusion

The introduction of artificial intelligence technology in computer network education has made the development of modern computer network education in China flourish. Through the application of various intelligent systems, the learning environment of computer network education has been greatly improved. The time and space of computer network education Restricting further breakthroughs has greatly extended the service field of computer network education. With the in-depth research and development of artificial intelligence technology in computer network education, the personalization of computer network education will become more prominent in the future, and distance education will achieve better development.

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