Comparative Study of Chinese and Foreign Intelligence Education

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Abstract: In recent years, the development of the Internet has spawned new teaching modes such as online education and flipping classrooms. Artificial intelligence has gradually been applied to the education field after the Internet. What follows is that people need to think hard about the role and impact of artificial intelligence on the education industry. This article discusses several modern educational teaching models based on artificial intelligence, including man-machine combination education, personalized education, and diversified education. We must fully understand the issues and impacts of educational intelligence, and thus use artificial intelligence ideas and technologies to better promote the fairness and efficiency of education.
Keywords: Comparative Study, Chinese and Foreign Intelligence Education

1. INTRODUCTION

Intelligent education, smart education, educational intelligence, and educational intelligence are new concepts that have recently emerged in the education field with the development of artificial intelligence technology. The so-called intelligent education, the author of this article thinks it has two meanings. First, it refers to the intelligentization of education and teaching process, which is similar to the concept of smart society and smart city. On the other hand, it is the enlightenment of personnel engaged in education work to carry out artificial intelligence education and teaching. Educational intelligence refers to the intelligentization of educational methods and modes in the education process. Intelligent educational teaching methods are used to reduce the burden of human teacher education and student learning and improve teaching efficiency. Wisdom education is a concept corresponding to quality education and other educational concepts. Prof. Zhu Zhiting, a famous education technology expert, believes that "Wisdom education is a new realm of contemporary education informatization, and it is the deepening and improvement of quality education in the information age, knowledge age, and digital age. ". According to this understanding, smart education is a means, and wisdom education is a goal. The intelligentization of education is another expression of educational intelligence, that is, the means to achieve wisdom education ultimately need to be intelligent. These concepts represent the new direction of future education. In the process of intelligent education development, a new branch of pedagogy—intelligent pedagogy, which is a social science that specializes in research on artificial intelligence education and its general laws, may emerge. Countries all over the world are actively exploring the connotation of smart education, integrating the correct educational concepts and smart education platforms such as the Internet of Things, big data, and cloud computing technologies to seize the leading position in the competition on wisdom. Intelligent education with the ultimate goal of developing smart education will constitute a subversive challenge to traditional education. The concept of artificial intelligence was born in 1956 at the Dartmouth College in the United States. It was first proposed by artificial intelligence pioneers Simon, Minsky, McCarthy, and others. There have been experts predicting that education is one of the two most knowledge-intensive areas where artificial intelligence is most likely to subvert. The impact of intelligent education on traditional education involves many aspects such as teaching philosophy, teaching process, teaching methods and methods, management and evaluation. This article focuses on the research of artificial intelligence technology methods in intelligent education.

2. ARTIFICIAL INTELLIGENCE TECHNOLOGY FOR TEACHING

(1) Educational robots.

Educational robots are divided into two kinds: software and hardware. The hardware education robot is a tangible robot that interacts with teachers and students through visual sensors, voice sensors, etc. It can be used as a teaching tool, that is, a robot teacher, and it can also become a student learning tool. A software education robot is an intelligent software that uses techniques such as graphic image recognition, text recognition, and natural language understanding. As a teacher's assistant, it can support the use of teaching equipment, provide learning content, manage the learning process, and answer frequently asked questions as a learning partner. Time and task management, sharing learning resources, activating learning atmospheres, and participating in or guiding learning interaction are software education robots at the initial stage.

(2) Multi-modal human-computer interaction intelligent teaching and guidance system.

The multimodal human-computer interaction

intelligent teaching aid system can be seen as an advanced software education robot. It realizes manpower through technologies such as big data combined with speech recognition, image recognition, handwriting recognition, speech analysis, and natural language understanding. Dialogue, without answering student questions through human teachers, makes it possible for machines to simulate questions and do services. That is to say, the software education robot in the primary stage is used to assist the artificial teaching, and the future trend is to form human auxiliary machines through various human-computer interaction technologies, and this process will reshape the future of learning and education, forming a kind of new type of teaching.

(3) Intelligent teaching ecosystem.

The combination of artificial intelligence and education to form an intelligent teaching ecosystem will revolutionize the current traditional teaching system. The system uses a combination of man-machine integration and intelligent information processing technology to customize personalized learning plans and study abroad (courses) services for students, and to perform examination analysis, selection analysis, and career analysis for students. Through the integration of human and computer to build a complete teaching ecology of "study, practice, reform, management, testing, and selection of schools", we provide students with the services of learning tasks, practice, correction, testing, and evaluation.

(4) Man-machine combined learning based on brain-computer interface and virtual reality.

In the early stage of intelligent education, artificial intelligence assisted teachers to prevent teachers from doing low value-added work, improve the efficiency of human teachers, reduce burdens and costs, maximize the teaching effect of excellent teachers, and shorten the path between general teachers and outstanding teachers. As technology advances, artificial intelligence gradually replaces teachers to help students acquire and learn knowledge directly from anywhere through the Internet, virtual reality, and brain-computer interfaces. Future education can directly acquire knowledge through virtual reality and brain-computer interface. It is very likely that the emergence of new technologies has greatly shortened the time for education. For example, artificial memory implantation technology and neuro memory code cracking have made it possible for humans to implant virtual memories for rats. Implanting memories and permanently storing memories is not a dream. Did you still need a modern education model at that time? Is implanted content a study? In fact, we have entered the era of self-learning with the aid of smart devices, and a combination of human-computer learning will play a greater role. In the future, knowledge engineering and data engineers may replace teachers. By matching mature knowledge and skills with receiving brain regions through the Internet or some kind of education center, including virtual reality space, the recipient can directly acquire knowledge or skills that have never been learned before.

(5) Adaptive learning.

Personalized learning is an important feature of adaptation, and it is also the biggest difference compared to MOOC. The basic process of adaptive learning is: collecting student learning data, predicting students' future performance, and intelligently recommending content that is most suitable for students, and ultimately, effectively and significantly improving learning outcomes. The foundation is big data + artificial intelligence machine learning technology. Big data + artificial intelligence machine learning technology will track all the students' learning process, find out the course of students' learning and the difficulties and focus of learning, so as to help students adjust the learning process in time and achieve better learning results. It is no longer a simple assessment and a simple score for students to achieve an adaptive learning. Therefore, from the current development trend of adaptive learning platform, the currently popular online education mode such as MOOC is just a transition to adaptive learning development of artificial intelligence. As Kai-fu Lee said in his "AI", "so in the future schools, the meaning and value of the course certificate will be far greater than the meaning and value of the diploma. What courses in the future may be more important because different learning centers different courses in different schools have different amounts of money, and not all courses in a university are great, so the best courses in different universities will make one person better and better. The future is to select the outstanding courses of the outstanding universities and the final combination. The final point is not to see how many points are scored, but to see what has been shared, what has been constructed, what has been created, etc."

(6) Simulation and gamification learning.

With the development of technology, artificial intelligence game-based teaching will become an important means for entertaining and learning, which greatly enhances the teaching level and means of the existing entertaining. The technology of the platform application will include virtual reality, computer vision, machine learning, human-computer interaction and so on. At present, there is no difference in the feeling of flying simulators and real aircraft, and the training of simulators is also more convenient. In the future, more teaching processes and learning content will be presented in the form of gamification, which will be provided to students through virtual reality, augmented reality, mixed reality and simulated games, and will be taught by artificial intelligence.

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3. KEY ISSUES OF INTELLIGENT EDUCATION

With the development of artificial intelligence technology, regardless of education practitioners, educators, or companies engaged in the education industry, the degree of attention to intelligent education and educational intelligence is increasing. Smart education should focus on the following key issues:

(1) How to design personalized, customized education that meets the needs of different students and evaluates the effectiveness of customized education.

When all the learners of the whole society and all knowledge transferers are connected by the network, even the participation in the future education activities may not only be human instructors, but also may include machine instructors, when all the one-to-one, one-to-many teaching activities When the data is collected in real time, the artificial intelligence technology can carry out intelligent analysis on the basis of this big data, help human education designers to summarize the gains and losses, monitor the quality of teaching, adjust curriculum design, and even collaborate with humans to jointly design a new teaching system. .

(2) How education can be sustained.

The popularity of artificial intelligence in the future also provides enough opportunities for people to convert work (for those who actively seek new goals) or stress (for those who are forced to switch jobs due to machines). The new talents required by the information society require a brand-new training model. Network education in universities meets this requirement very well. Since 1998, the Ministry of Education has launched a series of key projects for the construction of online courses, such as "New Century Cyber Course Construction Project" and "Modern Distance Education Project", etc. Some colleges and universities have begun preliminary exploration and practice. The gradual perfection of network technology and the popularization of applications will promote the development of online education. The development of online education will undoubtedly enrich and improve China's education system. Intelligent network education refers to the constructivist learning theory and teaching theory. It emphasizes student-centered and information processing subjects. It adopts network, artificial intelligence and multimedia technologies to build an intelligent online teaching platform and intelligent courseware. Internet intelligent computer aided teaching system for teaching interaction.

For the level of knowledge that online education faces, it is mainly higher education and basic education. In terms of academic education, online education should focus on higher education rather than basic education. Because online education requires trainees to study independently, their awareness of learning is very high. In the last two to three years, the training of various kinds of vocational and technical certificates is also another focus of online education. At present, there is a great demand for such training, such as certificates for accounting, lawyers, and IT. Any teaching involves teaching and learning two major subjects. The key lies in the intelligent Internet teaching platform based on the Internet and its application to this platform.

(3) The design of the education system must be considered earlier and more fully.

The fairness of the entire society Utilizes extremely sophisticated Internet resources and powerful artificial intelligence technology. In the near future, we will be able to truly spread high-quality education to every corner of the earth without distinction. In the era of artificial intelligence, learning or education is not an end in itself. The real purpose of education is to allow everyone with the help of technology to obtain maximum freedom, reflect the greatest value, and obtain happiness from it.

(4) How intelligent education theory has developed.

The development of artificial intelligence technology will result in a brand-new education model that will ultimately affect the effectiveness of education. It is not limited to one-by-one and niche people. When education is gradually equitable and flattened, all knowledge-based education can be achieved through technical means. To solve, the status of teachers will be weakened, and teachers will be transformed into education knowledge engineers, education knowledge editors, education data engineers, and advanced educational concept designers. The position of education authorities will also be reduced, and there is no need for a centralized command center. However, educators still exist and play an important role in the study of more advanced educational theories to guide how technology works better. Future educators may not be real people. They may be robots based on big data technology, or they may be virtual people in virtual reality space. This will force us to put forward new educational theories to meet the needs of future intelligent education development, and will also change the traditional philosophy of

education philosophy. To achieve artificial intelligence technology - intelligent education theory - the new stage of the integration of the development of intelligent education philosophy.

4. CONCLUSION

The combination of artificial intelligence and education is an inevitable trend in the development of educational informatization. Through big data, artificial intelligence teachers and parents, they will understand students more precisely. Otherwise, students will not be able to teach in accordance with their aptitude. Future education is possible with human-computer collaboration model, virtual reality education, even brain-computer interface to directly acquire knowledge, artificial intelligence to assist teachers, improve the efficiency of human teachers, and maximize the teaching effect of outstanding teachers. As technology advances, artificial intelligence gradually replaces teachers. Future education must be personalized and efficient. Artificial intelligence can help solve the problems of the education system and realize the change from "teacher-centered" to "student-centered".

ACKNOWLEDGMENT

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