Vol.3 No.6 2022
https://doi.org/10.37420/j.cer.2022.049

AI Education drives the development and change of education management

Lina Wei[1], Chantana Viriyavejakul[2]
Ph.D. Candidate in Industrial Education Faculty of Industrial Education and Technology King Mongkut's Institute of Technology Ladkrabang (KMITL). Thailand
Ph.D. Associate. Prof. Faculty of Industrial Education and Technology King Mongkut's Institute of Technology Ladkrabang (KMITL). Thailand

Since 2020, AI has developed rapidly and gradually integrated into the education industry, which has produced extremely extensive help and influence in the field of education. People apply AI technology to all aspects of teaching and education management. We call the application of AI in the field of education intelligent education.

The goal of smart education is to create intelligent helpers for education participants, AI education teachers and students in schools. Smart education is not simply a simple superposition of AI and education, but a deep integration of the two. Smart education is based on big data computing to understand the laws of education, and collects individual "small data" to discover the differences of students, to realize the teaching of students according to their abilities and to realize the cultivation of lifelong learning ability of people.

I History of AI education

The 1990s advocated the construction of information technology, which changed the traditional education form, and the expression and transmission of information underwent a qualitative transformation, and computer-assisted teaching, distance education, and Internet teaching made the teaching mode more open and shared.

Under the guidance of modern education concept, digital education, which uses various emerging information technologies to develop and rationally allocate educational resources, optimize the teaching processed and improve students' information literacy, has been developed. The computer technology and multimedia technology used in digital education are effective tools to ensure efficient dissemination of knowledge. Various online courses, digital books and teaching websites enable students to learn various knowledge more conveniently. The partial transformation of traditional education by digital education has AI education a firm foundation for AI to enter the field of education.

With the development of various advanced technologies and their application in the field of education, education is naturally upgraded from digital education to AI education Smart education relies on big data, cloud computing, VR\AR**,** and other advanced technologies to create a complete educational ecological environment. Learning is conducted through mobile, personalized learning support systems or software.

Since smart education, making full use of modern information technology can realize smart teaching, smart

learning, smart management, smart evaluation system, etc. It can improve students' thinking ability and creative ability, and at the same time cultivate many highly skilled and comprehensive talents, contributing to social development and progress.

II Opportunities and challenges for the development of smart education

1. Advantages of the development of AI education

1.1 Integrating resources and improving efficiency. Under the new development situation, traditional education can hardly meet the demand of society for talents, and AI education can enable more students to get better education resources, while its teaching is more personalized and efficient, so obviously its advantages are obvious. In the future, AI will not only be combined with big data and other technologies, but also with 5G, VR AR and other technologies, and will be widely used in the field of education, highlighting the individuality of education.

1.2 Improve students' comprehensive literacy and ability. In the new era, there is a huge demand for the core literacy and ability of talents, for example, China currently has a huge demand gap for big data and cloud computing talents. AI education can become a friend of students, develop personalized teaching programs,and carry out personalized teaching for students, promote the improvement of students' comprehensive literacy and ability, and give full play to students' self-potential.

1.3 Accelerate the spread of global classrooms. Under the trend of globalization, catechism in western developed countries enables students around the world to access quality educational resources from all over the world anytime and anywhere. However, catechism attaches importance to the transmission of knowledge, but ignores the cultivation of learning ability and has requirements for learners' knowledge level. Free learning platforms developed by China's Ministry of Education, such as the National Public Service Platform for Educational Resources, Learning Power, and the National Smart Education Platform for Primary and Secondary Schools, provide a platform for students at different learning stages under smart education that can create a new learning environment for students to achieve cognitive development and collaborative learning, break the limitations of catechism, and accelerate the spread of global classrooms.

1.4 Reduce teachers' repetitive work. Teachers teach in class and correct assignments outside of class, all of which have repetitive labor and take up a lot of time, while teachers need more time to innovate teaching methods to improve teaching efficiency and teaching standards. The combination of AI and multimedia and other teaching methods form an open teaching system that can realize personalized teaching according to students' knowledge level and learning ability. The development of AI technology combined with VR\AR technology has made it a learning assistant for teachers and students. Educational intelligent systems can help teachers with roll call, attendance, invigilation, and correcting assignments. The use of some intelligent robots can also help teachers improve their work efficiency and free themselves from repetitive labor.

Vol.3 No.6 2022
https://doi.org/10.37420/j.cer.2022.049

2. Opportunities for the development of smart education

2.1 The current social background provides numerous development opportunities for the development of AI education. Support at the national level, the country attaches great importance to the application of AI technology in the field of education, and has vigorously promoted the construction of education informatization since 2016, with the introduction of the "National Medium and Long-term Education Reform and Development Plan (2010-2020)", the "Thirteenth Five-Year Plan for the Development of National Education The "Ten-Year Development Plan for Education Informatization (2011-2020)", "Thirteenth Five-Year Plan for Education Informatization", "Blue Book of AI Education 2022" and other supporting documents have been issued to speed up education transformation in the informatization era. Under the guidance of national policies, universities across the country have begun to strengthen cooperation with technology companies and explore the combination of AI and education.

2.2 Financing in the education market, a large injection of funds to provide capital support for the development of AI education. In the process of the sudden development of AI education not only a large amount of national capital investment, the giants of education groups in society also continue to increase the investment in AI education, China's well-known private education institutions New Oriental Education Group, Good Future Education Group in the AI education market continues to attract more capital inflows.

2.3 The great driving force for the development of AI education is technological innovation. The development of science and technology is a great driving force for the development of AI education, which makes the development of Internet+ education usher in new opportunities. With the rapid development of mobile communication technology, “VR\AR+ education”, “cloud +education “will create a new teaching mode. “VR\AR education” can simulate real-life accompaniment through teaching experiments and realize remote teaching. Cloud + education, so that online education is closer to offline education, for example, during the epidemic, international education classes in countries around the world are taught online using cloud platforms such as ZOOM\Webex Meetings\Teams\Tencent Meeting. In the process of teaching classes, teachers and students can achieve real-time interaction, and online education can realize immersive teaching scenarios with the help of artificial intelligence, VR\AR, and other technologies to improve students' concentration in learning.

3. Challenges to the development of AI education

The development of AI education has opportunities and faces cert AI education challenges. The development and application of AI is the trend of the times, but as far as the current development situation is concerned, there are three AI education problems as follows: first, there is a cert AI education talent gap problem; second, there are different usage conditions in the promotion process; third, in the process of big data analysis, data security is also a problem that must be AI education attention to.

3.1 With the intelligent development of education, the demand for new educational talents in the field of education is growing, but the current AI education speed for AI is difficult to keep up with the speed of the development of artificial intelligence, AI talents in the field of education is very scarce, in recent years, the state encourages various universities to open artificial intelligence-related majors to AI education talents in

this area, but the current job market is still very short of AI Talent, the AI education of AI talents is relatively lagging behind, the talent gap in the field of AI still exists, and the development speed of AI is bound to be affected.

3.2 Difficulties of AI and teacher collaboration. With the application of new technologies, the interaction between teachers and students is of great concern. A part of teachers prefers the traditional education system and find it difficult to adapt to the use of new technologies; another part of teachers, even though they do not reject the use of new technologies, need a long time or a lot of technical AI education, and if the AI education is not effective, then the synergy between teachers and new technologies in actual teaching will not be obvious and students' teaching experience will not be particularly good.

3.3 Security issues in AI. The development of the Internet also makes some network problems prominent, such as network violence, information leakage, and network deception. The leakage of teachers' personal and teaching information and the problem of students' cyber violence all require the government and schools to pay attention to protect the privacy of schools and teachers and students, and promote the benign development of AI education

III the future development trend of AI education

In the era of AI education, the research and development of AI devices is one of the key points of research in the field of education. AI education devices can make students' future learning more scientific and intelligent; VR\AR education can bring students a better learning experience, improve students' interest in learning, mobilize students' senses and thinking to learn in an all-round way, and students' learning effect and learning experience are better. With the help of VR\AR equipment, teachers and students can have good interaction in the learning process, breaking the restrictions of time and space, making learning free.

With the development of the times, in addition to science and technology, professional talents are an important element for the development of AI education. The competition of AI talents will be a fierce war to seize the education market, and the cooperation between universities and enterprises will be more and more extensive, and the cooperation between schools and enterprises will AI education focus on the integration of production and education and the construction of modern industrial colleges, to cultivate a group of high precision AI talents for the country.

IV Conclusion

The development of the new generation of information technology promotes the construction of AI education system ecology, which brings new development opportunities for education transformation and provides a new way to realize the dream of education of "teaching without discrimination, teaching according to ability, and teaching for fun" for thousands of years. Capital and companies in the education market are actively promoting the development and application of technology. However, in order to truly capture the high ground of AI education, to reshape the education ecology, to integrate with education, and to empower the future together, we need to pay close attention to the development of AI education and the challenges it may face, and

Vol.3 No.6 2022
https://doi.org/10.37420/j.cer.2022.049

to analyze and discuss in a forward-looking manner in order to cope with the wave of changes in the smart era.

References

1. "5G detonates the education revolution" Li Shuping and Liu Taotang, Electronic Industry Press.

2. "Review of the Development and Application of Artificial Intelligence" Hanshan Normal College Yuan Yunjia.

3. "The Development Trend of Intelligent Technology Transforming Education - Review of the 4th China-US Smart Education Conference

Institute of Smart Learning, Beijing Normal University, Beijing Yan Xiaomei, Gao Bojun, Wan Qingqing, Yin Xiayu.

4. "AIEmpowers New Changes in Higher Education Model" Huifeng Zhang, Institute of Advanced Technology, Nanjing University of Posts and Telecommunications (NUPT), Zhuxiang Chen, School of Automation and Artificial Intelligence, NUPT, and Crystal Xu, School of Education Science and Technology, NUPT.

5. "Application Areas and Promotion Strategies of AI Technology in Teaching and Learning in U.S. Schools" Zhengqing Wang, Jinfeng Dan, Institute of International and Comparative Education, Department of Education, Southwest University.

6. U.S. Department of Education, Office of Educational Technology. Expanding Evidence Approaches for Learning in a Digital World.(2013-02-01)[2020-04-19].https://tech.ed.gov/files/2013/02/Expanding-Evidence-Approaches.

7. ZAWACKI-RICHTER O,MARIN V I,BOND M,et al. Systematic review of research on artificial intelligence applications in higher education :where are the educators?. Distance Education in China,2020,40(6):1-21,76.

8. Jensen,L.,& Konradsen ,F.A review of the use of virtual reality headmounted displays in education and training[J].Education and Information Technologies,2017,23(4),1515-1529.

9. Chad,L.H., &Gordon ,Metal. The Next 25 Years: How Advanced Interactive Learning Technologies will Change the World[J]. International Journal of Artificial Intelligence Education,2016,26:539-543.

10. Nilsson, N.J. The Quest for Artificial Intelligence: A History of Ideas and Achievements[M]. Cambridge, UK: Cambridge University Press,2010