

Analysis of Measures to Further Promote the Application of "AI + Education" in Universities

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Abstract: In recent years, with the rapid development of the Internet of Things, cloud computing, big data and artificial intelligence technology, the progress and development of society has been promoted. At the same time, the integration of these technologies and education has greatly promoted the reform and development of university teaching. The role of current AI technology is outstanding. AI is increasingly used in university education and teaching. AI is affecting the transformation and progress of higher education, although AI has obvious advantages in improving school management efficiency, reforming teaching content, enriching teaching methods, and optimizing learners' learning experience. However, AI still needs to be constantly improved and improved in the process of educational application. This paper conducts some research and research on "AI+Education". On the basis of analyzing the influence and effect of AI on university education, it puts forward 13 problems that need to be solved in the further application of AI in college education, in order to engage in "AI+ education". People provide some references.

1. Introduction

Artificial Intelligence (hereinafter referred to as "AI"). AI is profoundly changing the way people produce, live and learn. The rapid development of a new generation of information technology represented by AI will revolutionize the traditional educational philosophy, education system and teaching model, thus further releasing the great potential of education in promoting the development of human society. AI quickly enters the field of education. It is both a new tool to promote education reform and a new content to be learned today. Education is an important place for AI applications. The use of human intelligence technology can accelerate the reform of talent training mode and teaching methods in colleges and universities, and build a new education system that includes intelligent learning, interactive learning and personalized learning. People are very optimistic about the application prospects of AI in university education, but the application of AI in education and teaching is still in its infancy, and it faces many problems that need to be solved. For example, it is necessary to carry out intelligent campus construction, further promote the application of AI in teaching, management, resource construction, etc.; build a comprehensive teaching environment, develop an intelligent online learning education platform based on big data; develop intelligent education assistants, and establish an intelligent education analysis system. Establish a learner-centered educational content accurate push service to achieve daily education and lifelong education customization [1]. Therefore, in order to realize the scientific application of AI in college education and teaching, it is necessary to discover problems, research problems and solve problems on the basis of continuous practice.

2. AI Education

AI is a new technical science that will be used to research, develop, and extend the theory, methods, techniques, and applications of human intelligence [2].

"AI+ Education" is an organic integration of AI and education. Implementing intelligent

education is to create an educational smart partner for educational participants. The two areas of AI and education are not simply added, but the deep integration of the two. That is, AI technology based on educational big data requires accurate calculation of students' knowledge base, subject orientation, thinking type, emotional preference, ability potential, combined with AI technology and educational rules, rational allocation of educational teaching content, scientific implementation of teaching, and improvement of teaching effectiveness. To promote the individualized development of students and the overall improvement of students' core literacy, and to achieve the purpose of education.

3. Analysis of the Changes in AI's Promotion of Educational Elements

The effect of AI on university education is mainly achieved by transforming into teaching resources, tools, media or the environment. That is to say, it also has an impact on the various elements of the entire teaching system. The specific analysis is as follows.

3.1. AI promotes changes in teaching objectives

AI requires new talent training goals to correspond to them, indirectly changing teaching goals. Adapting to the characteristics of fast change, dynamics and fast iteration of AI, the teaching objectives will change. Promote people to re-examine the goal of talent training.

3.2. Comprehensive changes in the subject and object of teaching

The application of AI in teaching will, to a certain extent, replace teachers and students with certain application forms, and play a key role in the teaching system, so that the traditional teaching and object-oriented model with teachers and students as the core shifts to AI. The teacher, the student and the student are the core teaching subject and object models.

3.3. AI affects changes in teaching content

The teaching content will inevitably change under the direct effect of AI technology. Currently in the field of higher education, AI is learning, deep learning, etc. Under the current background of AI, human beings have gradually entered the information intelligence era with intelligent technology as the core in the information society with digital technology as the core. In the future, the collaborative work between people and machines is likely to become the mainstream. People are required to closely study the changes in content and adapt to the development of education.

3.4. AI affects the transformation of teaching media

Teaching media is closely related to the teaching process. The media form is an important carrier for presenting teaching content. Therefore, the choice of the media has also become an important part of the realization of teaching. The teaching process is a process of collecting, processing, processing and utilizing information. The media used in this process is called the teaching media [3]. As a new technology, AI, especially in teaching, will inevitably affect the transformation of teaching media.

3.5. Impact of AI on the transformation of the teaching environment

The objective environment is the basis for carrying out learning activities, and to a certain extent directly determines the pros and cons of the learning effect. AI is a highly integrated and advanced technology, and the requirements for the application environment are relatively high. Therefore, the application of AI technology in teaching will inevitably affect the function of the teaching environment itself, and cause a great change in the teaching environment.

3.5.1. Impact of AI Teaching Hardware Environment

In the context of AI, the layout of the teaching space is required to be flexible and hierarchical. This puts high requirements on the design of the teaching hardware environment, and provides a basic guarantee for the personalized learning supported by AI. The combination of AI technology

and teaching environment not only provides a good user experience for teachers and students, but also can sense the learner's learning state and promote real-time adjustment of the hardware environment.

3.5.2. Impact of AI on Information Resources

AI technology will also have a certain impact on teaching information resources, which is an important influence of AI when applied in teaching. It affects the organizational form of teaching resources, the form of utilization of resources, the form of access to resources, the form of storage, and the form of transmission of resources. The way to generate information resources in the context of AI is changed from static to dynamic.

3.5.3. AI promotes changes in the form of interaction

AI promotes a more natural and fluid interaction. The online space is gradually shifting to an interactive form of seamless integration between online and offline. At the same time, the AI teaching environment facilitates real-time tracking of the recording and storage of interactions between any individual in the space environment. Promote the application of diverse intelligent interactive technologies, such as natural interaction, wireless network, multi-screen interaction, integrated learning terminal, mobile Internet and other technologies to provide learners with intelligent interactive learning space [4].

3.6 AI promotes the transformation of teaching evaluation methods

In the context of AI, it promotes the evaluation of personalized learning. The evaluation of teaching in the context of AI should be a two-way and even multi-directional evaluation of individualization, procedural and summative, and systematic evaluation of the whole content of online and offline teaching and learning [4].

3.7 AI promotes the reduction of teachers' mechanical labor

The application of AI in teaching can free teachers from simple repetitive work, encourage teachers to engage in more creative work, and enhance teachers' personal abilities.

4. Realizing the Problems That AI Should be Further Improved and Solved in the Teaching Application of Colleges and Universities

Nowadays, the application of AI in university education is deepening. Because of the high technical content of AI itself, the requirements for other matching conditions in educational applications are stricter, and there will be such problems in the application. It is necessary to analyze and solve the problems found in AI applications in a timely manner. At present, the problems that should be further resolved are as follows.

4.1. Continuously promote the reform of the concept of higher education

With the wide application of new technologies in education, it also fundamentally promotes the reform and renewal of educational concepts. Only the renewal of educational concepts can actively use new technologies in teaching. AI continues to promote the renewal of educational concepts and promotes the transformation and innovation of educational models. Therefore, updating the educational concept is not only important but also an ongoing process.

4.2. Further Reform of University Management Model

With the reform and progress of the educational concept, it will promote the reform of the management model of colleges and universities, and promote the application of AI in teaching through the reform of the school management model. For example, through AI intelligent platform to achieve data collection and real-time monitoring, through data analysis, to achieve intelligent decision-making, optimize management, improve resource utilization, etc. [5].

4.3. Ability to cultivate depth and think independently, avoid weakening of thinking ability

AI will do a lot of things for us in the education process, all things are handed over to AI, our thinking ability will become weaker and weaker, and now there are such things as writing ability, writing ability, systematic reading and macro Thinking about weakening the ability. The use of AI as a supporter cannot weaken the cultivation of independent thinking ability.

4.4. Pay attention to the ability to cultivate human and peaceful coexistence

Now some AI robots have strong logical thinking skills, and we must think about how to live peacefully with AI. The only effective way to achieve peaceful coexistence between man and machine in the future is to make human beings stronger. Constantly improving the education level of talents is the key to peaceful coexistence between man and machine.

(1) AI education technology is not yet fully mature and is still developing. Many products on the market are still not smart enough, and there are problems such as sparse learning data and incomplete learning models.

(2) The combination of AI technology and education is not close enough. At present, most products only adapt to a single narrow field, and pay less attention to the development of students' comprehensive ability;

(3) The data opening and sharing between different education systems and platforms is relatively small, the information island phenomenon is serious, and the data of the whole process of student learning is not well collected;

(4) At the level of intelligent decision-making, the intelligent algorithms are still relatively simple, and can not fully adapt to the complex and varied educational teaching scenes, requiring more manual intervention;

(5) There is polarization between the value of AI. In fact, AI education applications should emphasize human-machine collaboration and use AI from objective actual needs.

4.6. Focus on the ethical and safety issues of AI in education

(1) AI has risks in terms of ethics and privacy. If the application is not good, it may cause a lot of trouble. The ethics and privacy issues faced by AI applications need to be further strengthened.

(2) Personalized learning requires a large amount of user data. On the one hand, the more detailed and accurate this data is, the more accurate AI can provide education; on the other hand, once these detailed data are leaked, personal privacy will be completely exposed, which will be extremely harmful.

(3) AI personalized education may expand the difference between people. AI is not a standardized education, and the result may be that the gap between people is growing.

(4) Pay attention to the negative effects of AI. For example, use AI for exam cheating. We must strictly guard against the use of high-tech means such as AI to undermine the issue of educational equity.

4.7. Cultivate AI research and development and application talents

Open AI related majors in colleges and universities, and cultivate a large number of AI professionals. At the same time, we must also pay attention to cultivating AI application talents and promoting the development of industry applications. Open some AI courses in non-AI majors.

4.8. Reconstruction Machine - Student - Teacher Relationship

AI enters the teaching field, such as using AI robots. How to deal with the new relationship between AI machine assistance, students and teachers is particularly important. It will definitely bring about the reconstruction of the relationship between the three, not just the reconstruction of the relationship between the teacher and the student.

4.9. Incorporate digital literacy into the general education system as soon as possible

In order to better adapt to the AI teaching method in the learning process, students must improve their digital literacy. Therefore, schools should take the initiative to integrate digital literacy into the

education system so that students can better complete the learning process and achieve good learning results. At the same time, it promotes the application of AI in teaching.

4.10. Form a "school, enterprise, government" linkage mechanism as soon as possible

(1) Establish a government-led linkage mechanism

Give play to the government's leading position in the development of AI education, especially the role of the government in organizational management, financial support, talent introduction and overall coordination. Mobilize the power of government, schools and enterprises to jointly promote the application and development of AI in education. Strive to realize the integrated development of production, learning and research of "AI+ education" and form a new mode of compound cultivation of "AI+ education" talents [6].

(2) Establish a school-enterprise cooperation and win-win model

Strengthen the school-enterprise linkage and deep integration, and solve the technical and product problems of AI in teaching application through enterprises, which is the key to realize the complementary advantages of universities and enterprises in the field of AI education. Schools, governments, and businesses can make full use of their strengths and resources through agreements. Encourage high-end talents to enter the campus to conduct AI teaching research and realize the rapid development of AI in educational applications.

4.11. Develop a teacher training mechanism

The most important thing to achieve AI in education is the teacher. In addition to the change of educational philosophy, it is more important to train teachers on AI technology and AI to apply relevant content and methods in teaching. Establish a new model and new mechanism for AI teacher education and training.

4.12. Opening an AI Education Discipline or Major

Train AI education professionals with disciplines or majors as a carrier to provide a good faculty for AI applications. Alleviate the current lack of AI education teachers.

4.13. Actively carry out AI teaching reform

To achieve a deep integration of AI and education. At the same time of application practice, research on the reform of AI in teaching should also be carried out.

5. Conclusion

The use of AI technology in teaching promotes the wisdom transformation of the school's learning environment, teaching methods and education management, and forms an accurate, individualized and flexible educational service system to meet the development needs of students to the maximum [7]. The promotion of AI to education and teaching is recognized by all, and the role of "AI+ education" will become more and more important in the future. At present, the application of AI in education and teaching is still in the initial stage of development. There will be problems and difficulties in application in this application. This paper also proposes 13 improvement measures based on the analysis and summary. As long as we constantly change the educational mechanism, change the educational concept, and strengthen our confidence, the whole society will form a synergy from top to bottom, actively use AI technology in education, and constantly discover and solve problems in the process of application to promote AI in education. Rapid application and development to greatly enhance the core value of education.

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