

The Impact of Chatgpt on Students in The Context of Big Data

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Abstract. In the current era of rapid development of artificial intelligence such as GPT, how to integrate new technologies such as GPT into the education industry and bring better education to students is a hot topic. Although human have many new technologies that can theoretically be applied to the education industry. However, in reality, there are not many scenarios in which these new technologies can be used in the education industry at present. It is determined that new technologies such as artificial intelligence in the big data environment can bring some positive impacts on students' education. It has been determined that new technologies such as artificial intelligence in the big data environment and the use of new technologies by teachers can have a positive impact on students. Therefore, this article suggests that in the future, various new technologies can be brought into the classroom to provide students with a better teaching environment, bring a better teaching experience to students.

Keywords: ChatGPT; education industry; teaching environment.

1. Introduction

At the moment of rapid development of artificial intelligence, various industries are facing a huge impact from artificial intelligence, and finding corresponding solutions is inevitable in this era of rapid development of artificial intelligence. How to balance artificial intelligence, teaching methods, teachers and students is a highly discussed topic in the education industry today. There has been a high level of discussion since the rapid development of ChatGPT, especially regarding how artificial intelligence can better integrate into the education industry. Although some people believe that artificial intelligence should not be used in the education industry. But actually, artificial intelligence can provide better ways for humans to achieve educational goals [1]. At the same time, education is shifting towards precision and personalization. For example, many online learning websites such as MOOCs are now available for people to learn about their favorite projects. The various data generated by online learning in the big data environment can not only bring teachers a large amount of high-quality data, but also these data are precious for the training of artificial intelligence in education [2]. This article aims to study the impact of new technologies such as artificial intelligence on students in the context of big data, as well as the impact of teachers' use of these new subject skills on students' development.

2. Current Situation and Feasibility

2.1. Current Situation

Artificial intelligence models such as ChatGPT are a rapidly developing technology in recent years. These artificial intelligences have been applied in various industries and have achieved some results. Even though this artificial intelligence can indeed facilitate workers in various industries and save them a lot of time. However, ChatGPT is currently controversial in the field of education. Although many artificial intelligence models, including ChatGPT, have emerged in recent years, the education industry has been using artificial intelligence for over 25 years [3]. Many technologies, such as various interactive forms of artificial intelligence education applications and collaborative learning intelligent support systems, have emerged for some time. Therefore, it can be affirmed that ChatGPT can effectively help students and teachers, but at the same time, it has brought many problems. These issues are seen as obstacles to the integration of artificial intelligence into the education industry. But

people have not given up on applying it to the education industry. Based on the data and materials obtained in the environment of big data, continuously improve existing artificial intelligence models to better adapt to the needs of the education industry. Compared to artificial intelligence, big data technology is much more mature. However, due to its extensive and diverse content, it has become a burden for artificial intelligence, with many false information mixed in with big data, bringing serious negative impacts to artificial intelligence.

2.2. Feasibility

In the future, many new technologies such as ChatGPT, artificial intelligence, and even big data will be used more as practical auxiliary tools in education. Still with teachers as the main body but incorporating more new technologies to assist teaching. The currently known HDNN system is a very good system that can meet the feasibility and accuracy standards of system analysis and can be used to predict and analyze student learning situations. Educational data mining (EDM) and learning analytics (LA) are also models that help teachers analyze students, and teachers can conduct preliminary analysis through models and artificial intelligence. And it is possible to use platforms similar to Kejarcita to further collect and understand students' own situations. In this way, teachers can save a lot of time and have more time to find a more suitable development direction for each student, as well as understand their ideas [2]. Artificial intelligence systems can learn based on the habits of users or students. Even artificial intelligence can provide recommendations for materials that require further research and other materials based on the results obtained by teachers [4]. At the same time, artificial intelligence combined with new technologies such as VR and AR can be integrated into an independent teaching system, which can not only stimulate students' interest in learning but also make it easier for artificial intelligence to collect the data needed by teachers. Among them, Education 4.0 mentions that not only AR and VR, but any technology used in learning scenarios and educational environments such as schools is a part of modern education, which can improve student education, stimulate students' interest in learning, and other aspects [4]. In the environment of big data, various industries have a huge demand for data. The education industry is no exception, and all the data generated by the application of new technologies in education are important materials for teachers and students to think about how to proceed next. On the other hand, teachers can use big data to update and utilize updated teaching materials to better adapt to their classrooms and provide students with a better learning experience.

3. Problem Analysis

3.1. Difficulties in Integrating GPT into Education

One major issue with integrating GPT into education is that its true principles are not easily explained, and this uncertainty can lead to a decrease in the trust of educators in the eyes of students. This is the reason making it difficult for GPT to integrate into the education industry [5]. Nowadays, both mobile phones and computers have many convenient and fast software similar to artificial intelligence, such as GPT. It is not difficult for people to use GPT, so another problem that makes it difficult to integrate GPT into education is that both students and teachers tend to overly rely on GPT. Moreover, due to technical issues that cannot be resolved temporarily, GPT may provide answers that different from those given by teachers, leading to controversial issues for students [6]. And as everyone knows education requires moral constraints compared to other professions. Other professions can use GPT without any psychological burden, but the use of GPT in education is widely believed to undermine the moral needs of teachers and students. So, it is very difficult to promote the use of GPT in education. On the other hand, the technology of GPT is not yet mature, and it is easy to encounter problems such as meaningless or false information provided by ChatGPT.

Secondly, as a technology product closely connected with the Internet, there is still a need to doubt the security of GPT. Since the data source of GPT is the Internet, if students' data is input into GPT or similar AI platforms, these personal privacy data will easily flow into the Internet. This has a great

impact on students' safety, and how to integrate into GPT while protecting students' privacy and security is one of the challenges that still needs to be overcome. Therefore, even though the prospects are promising and with the development in recent years, artificial intelligence has made rapid progress in all aspects. But to integrate into the education industry, artificial intelligence needs more data polishing, and government intervention is still needed to ensure its safety, correctness, and even how to solve ethical and moral issues.

3.2. Improper Use by Students

Artificial intelligence is a new tool for students, which can easily help them optimize their learning experience, such as providing ideas for writing papers, quickly providing relevant materials, and so on. However, a large number of students develop a dependency mentality after learning to use these new features because they can easily and quickly help themselves complete certain tasks. They believe that GPT can solve all problems. But in reality, the correctness of GPT itself cannot be guaranteed, and it may inadvertently affect students' tasks. In addition, various models including GPT cannot adapt to students' learning needs and styles nowadays [5]. On the other hand, various entertainment AI models developed from GPT, such as some novel AI and dialogue AI. For younger students who can use it, it is also a temptation, just like electronic games nowadays. Improper or excessive use can hurt students.

3.3. GPT and Software

At present, the linkage between big data and artificial intelligence is mature, and the data sources of artificial intelligence are all based on the content generated by big data and the Internet. However, there is still a significant gap between artificial intelligence and other new technologies, as well as old teaching software. As the latest artificial intelligence, the adaptability of GPT to other software is still unknown. Many artificial intelligence software exists in a human-computer interaction or self-contained manner, which is why the adaptability of many existing software, including GPT, still requires official websites. Even though the learning ability of artificial intelligence is very strong. But for now, artificial intelligence is mostly used in conjunction with teachers in a human-computer interaction manner [7]. In the education industry, the compatibility of artificial intelligence such as GPT with teaching software still needs to be considered. How to combine the two is a technical problem that needs to be solved. Reasonable adaptation is necessary to provide students with a better environment and ensure safe use.

4. Suggestions

4.1. Use AI Correctly

At present, many artificial intelligence systems, including GPT, are still in the stage of continuous development. Therefore, the student community should be aware that some of the answers provided by this artificial intelligence need to be verified, and the appropriateness of the results given by GPT should be checked to avoid errors. For students, it is best to use GPT only as a tool for auxiliary thinking, and GPT can serve as a medium for discovering problems. If GPT gives incorrect answers at times and solves the problem with their efforts or with the help of others or teachers, it can leave a deeper impression on students at this time. Excluding issues with the software itself, students need to develop good usage habits for ChatGPT on their own. As a tool for auxiliary learning or research, the appropriateness of the results provided by GPT should be routinely checked to avoid errors during the learning or research process. In addition, it is mentioned in Education 4.0 that students need to receive relevant training to use the relevant content of Education 4.0 [4]. Therefore, before related technologies including GPT truly mature, it is not only necessary for teachers but also for students to receive relevant training. And with the reasonable use of ChatGPT, students can have a clearer awareness of their development direction. Because in the context of big data, students can easily find courses they are interested in online and engage in learning. Therefore, with reasonable application,

GPT can help students explore the advantages and limitations of the technology they are interested in, while also improving their abilities. Moreover, the use of artificial intelligence by teachers can provide students with a better learning experience, allowing them to train their desired abilities faster, learn the knowledge they want, and achieve better learning outcomes for themselves [8].

4.2. Use Artificial Intelligence to Influence Students

Although similar to students, teachers also need to prevent similar abuse situations from occurring. However, the teaching industry should not only consider the same situation as students but also consider how to use artificial intelligence to assist themselves in their teaching tasks and better help students progress. For example, in the case where artificial intelligence can collect and analyze data generated by students, teachers can use the data analyzed by artificial intelligence to further understand the specific situation of students and can make an evaluation report for each student through the combination of themselves and artificial intelligence. These evaluation reports can help teachers optimize their teaching work and better assist students in making progress. At the same time, it also allows students to have a deeper understanding of themselves and discuss their development with teachers. Meanwhile, artificial intelligence can also produce better lesson plans for teachers and provide more targeted teaching for students. For example, using artificial intelligence to improve one's curriculum planning and development for students, enhance the quality of education, and provide students with a better course experience [2].

In addition, artificial intelligence can also assist teachers in various ways. For example, intelligent learning companions can help teachers collect students' learning situations and interest levels in a certain subject [7]. Although the hardware may not be perfect at present, and the form and price of robots are not suitable for entering the learning environment of ordinary students, they can still serve as a way to assist teachers' teaching in the future.

4.3. Better Integrate New Technologies such as GPT into Education

Big data, as a new technology in the same era as artificial intelligence, is often used in daily life. Especially for emerging e-commerce platforms, big data is tailor-made for them. However, in the education industry, big data also has its place to play. For example, it can help teachers systematically collect relevant data such as predicting student behavior and integrate the collected data [4]. Although there is currently no proprietary model to analyze the relationship between student behavior, grades, and preferences, the DNN and HDNN mentioned above are only preliminary predictions. Artificial intelligence can still perform preliminary screening on these data, allowing teachers to greatly shorten the time they originally spent analyzing data. This way, teachers will have more time to explore and analyze their own students, form a set of educational data mining using big data and artificial intelligence, and form a transitional system for teachers to integrate learning analysis [4]. Moreover, new educational technologies are also flourishing, not only online courses but also VR and AR in the future can further improve existing education methods. At the same time, both online courses and VR and AR are based on digital networks. In the context of digital networks, these technologies have played a crucial role and due to the operation of big data and machine learning, artificial intelligence can effectively analyze them and learn how to more effectively personalize learning for students [4]. Now there are also developers trying to develop explainable AI and implement more effective data protection measures, and relevant regulations are being further updated [5]. These are all helping to better integrate new technologies such as GPT into education. In addition, there are already some practical applications of artificial intelligence, such as private tutors, intelligent virtual reality, etc [7]. These practical usage methods can also be applied to transitional systems. For example, artificial intelligence private tutors can better serve students, and in the future, combining them with hardware or robots can also bring students a more immersive experience [7].

5. Conclusion

By reasonably utilizing ChatGPT and artificial intelligence, teachers can improve their efficiency and provide students with a clearer goal. By developing one's strengths, students can be diverted earlier and learn professional knowledge related to their profession, allowing them to have a longer and more detailed understanding of the relevant professional knowledge. Abandon unnecessary knowledge input, to achieve specialization in various industries. More cutting-edge knowledge is brought to students more vividly and visually, and there is more time for relevant analysis of students. Artificial intelligence collects and summarizes data for preliminary analysis and screening, and finally, teachers and students jointly make the final decision. And through the preliminary analysis of artificial intelligence, teachers can provide more convincing and useful opinions. The earlier students are evaluated and analyzed; the clearer their future development plans will be. This requires both teachers and students to use artificial intelligence as a tool for their progress, rather than a lazy tool. And the filtered big data is a tool for further integrating artificial intelligence into education and bringing further development to students.

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