



A Study of the Impact of ChatGPT on Secondary Education

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Abstract

ChatGPT, a new term that has only recently emerged, is simply the "strongest chatbot on the planet" with an IQ of 147. When people talk to it, it can understand what people are saying because it has a certain amount of logic and common sense. It is characterized by certain writing skills and logical thinking patterns. The survey found that students in some foreign schools use it to write assignments and assist students in composition writing. "Advances in artificial intelligence technology, represented by ChatGPT, will have an important and far-reaching impact on all aspects of social life, including the field of education in schools at all levels." In how ChatGPT can make a significant contribution to secondary education, which is also an important issue we consider, this paper explores the impact of ChatGPT on secondary education and students for elaboration.

Keywords

ChatGPT, artificial intelligence, education field, secondary education

ChatGPT, a chatbot released by OpenAI, has been getting a lot of buzz, and one of the most amazing things about it is its ability to create content quickly and efficiently whether it's market analysis, investment data, essay writing, poetry creation, or just everyday chatting. At this stage, ChatGPT is able to write and apply to daily life situations after training and correction. If we look at it from the students' point of view, the most direct thing is that it can help students complete their assignments with higher quality, improve the correct rate of their assignments, and allow them to easily access the knowledge they want to know, which improves the efficiency of the classroom.

1. Analysis of the impact of ChatGPT on education

ChatGPT will also have a deep impact in the education sector, where the technology is driving the application of artificial intelligence, bringing a huge impact to China's primary and secondary school education system and greatly affecting both campus management and education. It can play a prominent role in both campus management and examination management. The new technology can substantially improve the efficiency of examination management, speed up the relevant arrangements for candidates, help improve the quality of school management, change the management level, meet the pain point of unified online examinations in educational institutions that are difficult to sustain, and better implement quality education (Zhang Liping, 2020). In addition, the technology can also help schools to better count the information of students in classes, improve the accuracy of information, reduce labor costs, and at the same time improve the efficiency of classroom management and ensure that students' behavior is adequately regulated. Most importantly, the application of this technology will also directly influence the learning of learners, allowing them to

achieve more effective results in the process of education. The technology's powerful intelligence can form a bridge to knowledge around scientific theories, helping students to better understand knowledge, improve learning efficiency, make education more regular and make it easy for students to gain knowledge. Finally, the application of the technology in school teaching activities can diversify teaching resources, meet the needs of information-based teaching in schools, improve the shortcomings in teaching, and enable students to get more out of it, better satisfy their knowledge and increase their enthusiasm and motivation for learning.

2. The value of ChatGPT in secondary education

Humanity has been constantly striving to experiment with the application of artificial intelligence in educational systems. Artificial intelligence has been valued by experts in the field of education since the 1970s, and educational expert systems, also known as tutor systems, have gradually entered a period of booming development, such as SCHOLAR in teaching geography in South America, AutoTutor in physics, mathematics, programming and other educational fields, and the Cognitive Tutor series in mathematics and physics. People hope that computers can play the same role as human teachers in teaching and effectively help students in learning (Tan Cijin & Li Renyuan, 2019). Since the 21st century, the continuous development of various advanced technologies such as artificial intelligence, big data, and learning analytics has made people pay more and more attention to adaptive learning. And the technology based on artificial intelligence is the core of it, through the means of artificial intelligence technology to achieve massive learning behavior data analysis and then summarize the learning characteristics of learners and on this basis to implement personalized intervention.

Some of the core values of the application of artificial intelligence technology in the field of education are as follows: First, from the perspective of learning, the application of artificial intelligence technology can realize personalized adaptive learning and can better cultivate personalized innovative talents (Wang Shao, 2021). For example, in secondary education through the application of mathematics learning platform, students' mathematical knowledge is cut into task progress maps composed of multiple visual cubes. Learners can freely choose the knowledge points they need to learn according to their personalized learning paths, or they can test and connect through the platform to target the mastery of a certain knowledge point. Secondly, at the teaching level, the use of human-computer collaboration technology to create super teachers makes teachers happier. Teachers supported by artificial intelligence technology can help teachers automatically review homework, automatically issue questions, and automatically target students' learning problems, and then realize personalized teaching for students on this basis. Students' physical and mental health can be evaluated by artificial intelligence, and students' development career can be planned well. In this way, with the support of artificial intelligence, teachers don't have to be busy every day, but they can be omniscient. Finally, from the management level, artificial intelligence can effectively improve students' management efficiency and decision-making level. At present, the education system needs to accumulate a large amount of data at many levels, such as learning and dining, and data analysis itself is a tedious task, which can greatly improve the work efficiency with the support of artificial intelligence technology.

ChatGPT as a new generation artificial intelligence product can also realize the above-mentioned educational value, which has outstanding capabilities in several aspects such as dialogue and content generation, and even has some special application capabilities. From the perspective of learning, ChatGPT can provide "Socratic teaching method", so as to form effective guidance for students' learning through traps, questions and answers, debates and other means, and also provide timely feedback and help for students' learning. This is equivalent to placing a teacher around each student who accompanies them throughout the day.

From a pedagogical perspective, ChatGPT can collect more teaching resources for teachers and automatically generate teaching plans, textbooks and prepare courseware based on students' learning conditions. For example, teachers need to use photos when publishing academic papers, but in the traditional mode, teachers need to search for them through the Internet, and there may be copyright issues. ChatGPT can automatically generate more suitable images. From the management point of view, ChatGPT can help schools to complete a large amount of transactional work, and also play a role in management decisions.

3. Practices of secondary education in the face of ChatGPT challenges

First of all, from the aspect of learning from the individual secondary school student, school education is for the survival happiness and development of the individual student and from the human perspective school education is for the continuation and development of the human race. Also to understand the nature of learning, learning from a physiological point of view is shaping the connections of each person's brain and neurons, and these connections represent the

knowledge and skills that each student acquires and the way each person thinks. At the same time learning by its nature from a social point of view is also shaping the connections between people. It follows that the result of our learning is on the one hand the possession of our own unique thinking brain and on the other hand the formation of an interpersonal relationship. We acquire relevant knowledge and skills by reading, asking questions and participating in the learning process, interacting with people in the classroom and with the help of hands-on practice. In the process of interaction, basic social relations and organizational norms can be formed. These basic educational elements are stable and can transcend technology, which is the most basic attribute given to people by learning. Human learning exists no matter how science and technology develops (Gao Qiqi & Yan Wenfeng, 2023).

3.1 Clarify the objectives of secondary education

For the goal of schooling, the goal of schooling is to be able to produce those who think independently and have the ability to make correct value judgments, and no longer to acquire specific knowledge. Knowledge learning is very important as the most important cue for brain connection, but it is worth thinking about which knowledge is important and which knowledge is secondary. For the current secondary education, valuable knowledge should be knowledge that can be quickly adapted to the world and can contribute to the future development of the world. That is why basic humanities, science and technology, and mathematics knowledge is very important, because it contains a large number of value judgment thinking tools and problem solving methods. In secondary education, we mainly develop students' logical thinking and promote a process of accumulation of knowledge. After defining the objectives of secondary education, the teaching objectives are clarified or refined based on the syllabus. By relating to ChatGPT potential language reading (Gu Xiaoqing & Li Shijin, 2022). Update the teacher's syllabus and also talk to students about academic integrity, view artificial intelligence generated classroom policies, and also reset instructional activities. Try assigning multimodal, higher-order thinking and learning activities, challenge-based learning, experiential learning, maker spaces, revising and designing new content and information, solving tough problems, and other assignments or problems that ChatGPT or other AI tools can't do.

3.2 Adjustment of secondary education methods

There is also the need to make adjustments in the approach to secondary education, with the main direction of adjustment being synergy through learning tools such as ChatGPT, rather than avoidance and fear. For humans, it is the fact that humans learn to use tools that is the reason for their own development. In fact, ChatGPT is a new kind of knowledge-based tool, in the sense that there is no difference from relying on books and libraries for millennia. Based on such a powerful intellectual tool, learning can help students achieve more outstanding results. If we worry that relying on it and lead to not independent thinking, then it is teaching content that is not valuable, or it is not finding the right teaching methods based on a simple foundation that is not understood, which requires educators to think about it.

3.3 Beyond knowledge learning

At the current stage, quality-oriented education is more concerned with students' learning ability and more concerned with their learning quality, which is as long as it goes beyond knowledge learning. Really good learning from a certain point of view is to seek slow rather than fast, only slowly learning can help the depth of thought to reach the promotion, in order to build a benign relationship in human interaction. It is difficult rather than easy, and only having a challenge with difficulty can motivate students to learn. In the learning process is to seek less rather than blindly seeking more, only less and more refined learning can help students in their free time to form a diverse brain, to achieve the development of their own personality, is to seek frustration rather than seeking coincidence, only seeking frustration to develop students' spirit of research and tenacity (Huang Jian, 2023). A student's success relies on the focus of learning, the ability to rise from interest to order, and the trait of being a different person full of personality, relying on responsibility and resilience, and being relentless and persistent when encountering difficulties, relying on good interpersonal relationships and the spirit of collaboration, and being able to get the support and help of the team when it matters. ChatGPT may be able to provide quick and easy answers to questions, but it lacks good critical thinking and problem-solving skills, which are critical to academic and lifelong success. However, developing these skills is a challenge in itself, and it is important to have an understanding of this.

3.4 Shortcomings of ChatGPT in learning

As we all know, when artificial intelligence represented by ChatGPT enters the education field, it does improve the

efficiency of student learning, promote students' motivation and improve classroom efficiency. But there are also certain problems in the assisted teaching. No matter how powerful artificial intelligence is, it can't replace teachers, but can only be used as a tool to aid learning because of its lack of understanding and sensitivity to students' emotional and psychological states. For example, there may be multiple reasons for a student's unsatisfactory performance, but artificial intelligence can only inform the student where the weak points of knowledge are, and cannot probe into the reasons behind the unsatisfactory performance. Luyu says that education has a temperature, so even the best artificial intelligence system can't replace the teacher.

In short, it is what gets measured that is doubly appreciated. Therefore, in order to bring more attention to the needs of the real secondary education level, it is important to evaluate around the relevant content. ChatGPT's investment in educational robots in schools can help schools rethink their teaching tasks and innovate by making assumptions about what is going to happen. The education system must move away from a knowledge-based curriculum and develop 21st century competencies in students so that they can adapt to a world where society and artificial intelligence go hand in hand. This task is daunting and urgent, and requires the joint efforts and cooperation of educators and students.

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