

## **EDUGPT: INTELLIGENT EDUCATION CHAT**

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### **ABSTRACT**

The chatbot provides thoughtful and useful answers by observing large amount of data. The renowned scientists, researchers, independent researchers and engineers talk about how expert system is revolutionizing education today. This paper highlights possible issues and difficulties and talks about chatbot capabilities and application in the educational field. According to our initial judgement, chatbot performs differently when it comes to finance, coding, arithmetic, and general public inquiries, among other topic areas. There are several obvious disadvantages of using this tool, including the possibility of providing false or inaccurate information and avoiding plagiarism detectors in situations where originality is critical. Despite its ability to help teachers create educational content, make suggestions, and act as an online guide for students answering questions, it is still a useful tool for teaching. When accuracy is crucial, the frequently discussed "hallucinations" associated with Generative AI in general and Chatbot in particular can make its application unproductive. A stochastic measure to facilitate sensitive and real communication with its users is what virtual assistant is missing. It Should be utilized as an instructional tool, academic norms and assessment procedures employed by educational establishments must be revised. Teaching instructors and students about its features and limitations is essential if we are to address the game-changing significance it has on the classroom.

**KEYWORDS:** Chatbot, GPTEducation, IoT, Machine learning.

### **1. INTRODUCTION**

Chatbot is generated by Artificial intelligence technology which allows us to have human-like communications. We can get answer of the questions and it help us in many works such as writing emails and essays. It helps us to implements daily tasks accurately. People like it because they help them to get those tasks quickly so they can focus their attention on high-level, strategic, and engaging activities that require human requirements that cannot be replicated by machines. Chatbots are software guarded by artificial intelligence that simulate human dialogue. They work by evaluating the context of a conversation and formulating what they believe to be suitable responses. They have been trained using extensive language datasets, so they can respond to a wide range of queries. Chatbots like Google Bard and ChatGPT can be useful for a variety of educational institutions, including professional development programs, universities, and primary and secondary schools. Despite its widespread use, this virtual assistant has brought new challenges and hazards to the field of education. Concerns have been raised about the possible abuse of AI-generated content (AIGC), which might be used to initiate homework assignments and examinations for pupils as well as personalized answers to assessment questions (Gill et al.,2024). Consequently, certain educational institutions have outlawed virtual GPT use by students; one such prohibition extends across a whole nation. After examining Chatbot effects on learning,

researchers discovered that teachers were apprehensive about implementing it in the classroom. They expressed worries that students would use it to outsource their tasks because of its ability to generate relevant text fast. Moreover, some problems have been found, such as replicated text, incorrect responses, and inadequate (or non-existent) reference. Therefore, in order to maximize the advantages of chatbot-assisted schooling while minimizing potential limitation, it is imperative to thoroughly assess its effects. This is not a novel phenomenon; comparable worries were raised when search engines were introduced (Zhai, 2022).

The way of teaching and learning can be changed completely with the help of artificial intelligence by providing different learning experiences. Personalized learning means the use of technology to adapt institutional experiences and content according to the specific needs, abilities and interests of each student. To provide personalized learning such as flexible learning, Artificial Intelligence can be integrated in different ways. To ensure different challenges in real time AI- systems can assess student progress and adjust lesson plan. Adaptive learning means to automatically change the content and difficulty of learning based on student performance. The effectiveness and efficiency of the student can be increased by providing them with new learning experiences according to their needs and abilities (Adlawan, 2024).

Artificial Intelligence is a useful tool for teachers as it helps them to create lesson plan, materials that are required for learning and assessment evaluations. The validity of the created content that need to be answered. Creating Training materials is the best solution for different courses like Edu Bot that can be used to teach English to students by taking the role of a speaker with whom the student can communicate effectively. These materials can be converting into an Artificial Intelligence-based chatbot. After that they have to verified that the content is valid or invalid. This will provide students good personalized learning experience. Furthermore, Chat GPT can increase active learning strategies. Like, flipped education can be used to read the material ahead (Hin Hong, 2023). Group communications in the classroom and other more interactive learning activities may be made possible by this style of instruction. Whereas pre-class learning might be difficult for students in conventional flipped classes. The COVID-19 pandemic brought this issue to light because the students who received their full education online but performed poorly in the classroom and showed little enthusiasm in sharing information with their peers. As a virtual teacher, ChatGPT can assist students with their independent online study by answering their questions and can enhance teamwork by providing ideas for a discussion framework and a prompt response (Watson & Romic, 2024).

## **2. LITERATURE REVIEW**

According to Zhai (2022), Artificial Intelligence is transformative changing world of online study. Various tools are used for language learning like EduGPT. It is used by many E-schools like Coursera to encounter common mistakes in assignments. Original tests and course materials can be created by teachers using Virtual Assistant, and companies. Artificial Intelligence chatbots are used to find comprehensive text that can help students by asking questions and getting answers of the questions. It can also be applied to improve the skills. Students can be familiar with different languages with the help of chatbot. We can change sentences, understand structure of sentence. Creating written content in response to test or essay questions is undoubtedly the most important and controversial use of it. Under the guidelines of this program, Teachers and students can write different essays on any topic. Moreover, it can provide more essays to improve spelling and grammar mistakes and sentence can become clearer and more understandable. It helps users to overcome with writing issues and provide new visions on the selected topic.

Artificial intelligence (AI) contributes to increasing the efficacy and efficiency of an organization's functions by making various management procedures more precise and nimbler (Palos-Sanchez et al., 2022). According to Mariano-Romero et al. (2022), artificial intelligence (AI) would enable educational establishments to effectively interpret and oversee data collection processes, enabling them to be integrated into comprehensive plans for educational efficiency. ChatGPT is one of the tools that has generated exiting discussion. This highly advanced chatbot, which is based on the GPT language model technology, can perform a wide range of text-based tasks, from simple question answering to more challenging assignments like writing essays and helping people have difficult conversations about productivity issues (Lund & Wang, 2023; Tlili et al., 2023).

Pattanayak (2023) concluded that the goal of transactional automation like financial processing, office management tasks for teachers and students, scheduling, tabulation, course management and registration can be obtained by automating and straining administrative processes in the education system. The main aim of automating institutional administration functions is to increase accuracy by providing free time for teachers and learners. Nowadays teachers and administrators can purely concentrate on education, which is to provide excellent learning experiences to students. If we automate administrative tasks, it can provide many benefits to the education sector like, it can reduce the workload of administrators and teachers by increasing accuracy and reducing errors. It saves money and time whereas it also makes the education system more efficient.

In the first, artificial intelligence is employed to drive the entire discussion around the function of the teacher in the classroom. In the context of artificial intelligence application, the teacher's involvement is essential for advancing innovative teaching approaches and enhancing classroom instruction. For trainers looking to create curricula, training materials, and assessment activities, ChatGPT is an invaluable resource (Rueda et al., 2023).

Elisa and Syarifuddin (2023) concluded that Future studies should evaluate ChatGPT's effectiveness in improving student learning outcomes and take into account the ethical and legal implications of implementing AI in the classroom. In order to make sure that learning is advanced, it is also very important to think about how to use virtual assistants like ChatGPT and other AI technologies into the classrooms in a such way that supports instructors rather than replaces them.

### **3. CHALLENGES OF INTEGRATING VIRTUAL ASSISTANT INTO EDUCATION SYSTEM**

Virtual Assistant application in the field of education increases a number of ethical questions. Among their concern were: -

1. **Bias:** The data which are used to train Artificial Intelligent system may contain discrimination in equality that the systems are difficult to maintain. Various students may experience unfair and unequal results. if the bias is connected to elements like socio-economic position, gender, caste and creed, race etc.
2. **Privacy:** Artificial intelligent systems mostly gather and process large volumes of student data. Privacy and security concerns may arise from it.
3. **Virtual Assistant in education increases concerns that it may reinstate human teachers and other education professionals, as a result in job losses and economic fluctuation.**
4. **Lack of transparency:** Because some expert systems might be challenging to make it easy and interpret, it can be challenging for teachers and pupils to learn the decision-

making mechanism. Although chatbots can enhance education, it has to acknowledge the probable problems that includes in light of digital poverty and the technical gap.

5. If we are using ChatGPT, then we have to face different problems like:
6. If we disabling or restricting ChatGPT then it would not fix any issues. We have to accept it and creating clear rules for its use in educational is preferable.
7. If we have to discern between data generated by AI and humans more oversight and transparency will be needed to. Regulators are now far behind technological innovation; legislative action is compulsory as a result of the conversation that all parties concerned have started.
8. To ensure accurate, captivating, and relevant responses in the context of engineering, novel approaches are needed to enhance and optimize the questions asked of ChatGPT.
9. The conversation goes far behind the confines of the education system whereas in the modern business environment, learning and assessment are continued activities. When a newly hired person is involved into the business and technical processes of an organization, and when a software engineer is evaluated and hired through a coding competition, there are many opportunities and problems that present themselves. ChatGPT may prove to be helpful as it can help developers produce more reliable software faster. Nevertheless, it is our duty as trainer to instruct the software engineer in the management and technology for the best solutions.
10. The combination of ChatGPT and IoT is Changing educators and students to interact with contemporary learning environments, and this will have a positive impact on E-Learning. Both IoT and ChatGPT have different room for development and expansion, and the applications of their respective domains might be found in everything from medical technology to contemporary teaching approaches.
11. We believe that in the future, that Learning will focus more on the human resources by relying more on ChatGPT or AI technologies to automate tasks like education guides, explanations of the problems, concept diagrams, mock test exams, and quiz. The main goal should be to move away from remembrance and toward the abundance of talents that human will need in the future. Moreover, we will allow teachers and students to use more comprehensive teaching and assessment techniques, such as project-oriented method, enquiry-based methods, more coordinating, or interdisciplinary education (Nazir & Wang, 2023).

#### **4. SOLUTIONS THAT CHATGPT PROVIDES**

There are few possible solutions that can be put together to create moral standards and best practices for the applications of Artificial Intelligence in the field of the education.

1. For the implementation and designing of Artificial Intelligence systems, equality should be maximized and discrimination should be reduced.
2. Putting in place Robust data security must be placed in proper place and apply private security to protect student information.
3. We have to ensured that expert systems conclusions are explicable and their application in learning is transparent.
4. We have to offer teachers guidance and assistance to help them easy and apply AI in the classroom.

In a nutshell, we conclude that it's critical to completely weigh the ethical utilizing of Artificial Intelligence in education and to put the right policies in place to remove any worries. Technological constraints: Artificial Intelligent systems can be complex, and their development and keep of it need a lot of resources and knowledge. If we talk about teaching, Artificial intelligence has various technical difficulties. Some of the following constraints are:

1. **Complex Level:** The development and upkeep of Artificial Intelligence's development and upkeep system may include different resources and their skills according to their complexity. It can be a problem for educational institutions and educators because it may lack some tools. Therefore, in order to effectively apply artificial knowledge, we must integrate multiple tools and information.
2. **Combination with modern systems:** Integrating artificial intelligence technology with well-established norms and procedures may present great difficulties for educators in a variety of educational settings. It may include privacy and security aspects.
3. **Internet Connection and surfing problem:** Artificial intelligence must be connected to internet for proper working. It may create some problems due to poor internet connectivity.

It may be very difficult for schools and teachers to install Artificial intelligence as they do not have complete resources that are needed. Some possible solutions to cover technological restrictions are:

1. Teachers should be properly trained and supported so that they can use this effectively in classroom.
2. Artificial intelligent systems should be made in such a way that they can be used by teachers easily by making them simpler and clearer. It should be ensured that expert systems are adaptive to current procedures and systems and offering support for integration when necessary. Infrastructural facilities should be given such as internet access to implement the application of artificial intelligence in education.
3. To implement Artificial intelligence in education effectively financial support and required resources should be provided (Bergman, 2023).

## 5. CONCLUSION

As a cutting-edge and promising technology to improve student-teacher engagement and the overall learning experience, ChatGPT has become a popular choice in education. The application of ChatGPT in education has a huge potential to revolutionize teaching and learning methods as its capabilities are explored and comprehended. When applied properly, this artificial intelligence technology greatly enhances students' academic performance and serves as a motivating tool for pupils by requiring them to use information and communication technologies. It is imperative to remember, nevertheless, that using it poses a number of difficulties, which educators need to be aware of in order to prevent improper use. However, it is also necessary to realize that not all of these facilities have a good impact on developing various skills of learning and creative writing. Therefore, it is mandatory for teachers to use learning than internet-based learning, in which students can misuse this in doing assignments. It can be implemented with the use of paper as a medium in a form of process control and assessment when compiling tasks related to creative writing.

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