Open AI in Education, the Responsible and Ethical Use of ChatGPT Towards Lifelong Learning

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Abstract

Significant changes have been brought about in society, the economy, and the environment as a result of the quick development of technology and the interconnection of the world. Artificial intelligence has advanced significantly in recent years, which has sparked the creation of ground-breaking technologies like Open AI's ChatGPT. Modern technology like the ChatGPT language model has the potential to revolutionize the educational landscape. This article's goals are to present a thorough analysis of the responsible and ethical usage of ChatGPT in education, as well as to encourage further study and debate on this important subject. The study found that the use of ChatGPT in education requires respect for privacy, fairness and non-discrimination, transparency in the use of ChatGPT, and a few other factors that were included in the paper. To sustain ethics and accountability in the global education sector, it is advised in this study that all these recommendations be carried out.

Keywords: ChatGPT, Education, Ethical, Responsible

Introduction

The rapid pace of technological growth and global interconnectedness has brought about substantial changes in society, the economy, and the environment. These changes are collectively referred to as megatrends. As the 21st century progresses, these megatrends are expected to continue (Haluza & Jungwirth 2023). The field of artificial intelligence has made significant strides in recent years, which has led to the development of innovative technologies such as Open AI's ChatGPT. The ChatGPT language model is cutting-edge technology that has the potential to bring about a sea change in the field of education. As the implementation of ChatGPT in educational settings becomes more widespread, it must be done so following principles of responsibility and ethics. To this day, ChatGPT is the most advanced chatbot that has ever been created. In contrast to previous chatbots, it is capable of producing outstanding text within a matter of seconds, and it has generated much buzz and doomsday predictions regarding student assessment in higher education as well as a variety of other issues (Rudolph et al., 2023). ChatGPT is a cutting-edge language model that is a modification of OpenAI's Generative Pretrained Transformer (GPT) language model. Its purpose is to generate text that is indistinguishable from content that was authored by people. It can hold conversations with users in a way that is deceptively simple and easy to understand.

Throughout the development of educational technology, many different technological advancements have been envisioned as the end of traditional education in its current form. This

has frequently been the result of a euphoric and rather illogical love of technology (Rudolph et al. 2023). Since the beginning of the 20th century, many forms of media such as film, radio, television, computers, the Internet, mobile technologies, social media, and virtual, augmented, mixed, and extended reality have been hailed as having the potential to revolutionize the educational system. Nevertheless, throughout the development of educational technology, there was frequently insufficient consideration given to how instructors deployed such resources and how students interacted with them. Even though machines have significantly altered many aspects of daily life in the 20th century, a visitor from the 19th century would feel quite at home in a modern classroom. This statement is still relevant because the traditional learning environment in physical classrooms has remained fundamentally unchanged (Ferster 2014).

Students continue to place a high value on credentials, which educational institutions have a monopoly on. These credentials include how students are taught as well as research and other forms of educational activity. Although there is a long history of viewing technology as a panacea, hopes for radical innovation in education are often exaggerated. This is because it turned out that credentials continue to be highly valued by students. Having said that, the fact that ChatGPT can comprehend and react to human language has made it an extremely useful tool for teachers, students, and other types of learners. However, because ChatGPT is becoming more widely used in educational settings, its application needs to be governed by principles of responsibility and ethics. Responsible and ethical use of artificial intelligence in education goes beyond ensuring technical accuracy; it involves considering the potential social and ethical implications of its implementation, such as concerns about personal privacy and bias, as well as the role that AI will play in forming the educational landscape of the future.

The ethical and responsible use of ChatGPT in educational settings is a complicated and multi-dimensional issue that calls for an approach that is nuanced and interdisciplinary. The necessity for the responsible and ethical use of artificial intelligence in education has been brought to light by recent research. The studies that have been conducted on this topic have focused on topics such as privacy, bias, and the potential for AI to contribute to the digital divide (Garrett et al. 2020, Borenstein & Howard 2021, Holmes et al. 2021, Nguyen et al. 2022). Other academics have also stressed the significance of taking into account the role that AI will play in determining the course of the future of education, as well as the requirement for multidisciplinary approaches to the ethical and responsible application of AI in educational settings (Hoppe et al. 2003, Paulus & Langford 2022, Carvalho et al. 2022). The previous research will serve as a foundation for the current investigation, which will expand upon previous findings to focus on the ethical and responsible application of ChatGPT in educational settings. This study is an investigation of the ethical and responsible use of ChatGPT in educational settings, with a particular emphasis on the facilitation of lifelong learning. In this session, we will talk about the different ways that ChatGPT can be used in education, as well as the opportunities and difficulties that are presented by using it. The purpose of this article is to provide a comprehensive review of the responsible and ethical use of ChatGPT in education, as well as to promote more research and discussion on this vital topic.

Materials and Methods

This paper employs the crucial document analytical method, wherein individual documents (news outlets and blog posts) and physical evidence (published journal articles and books) have been reviewed and analyzed, to assess Open AI in Education, the Responsible and Ethical Use of ChatGPT Towards Lifelong Learning. The first thing the author did was perform a global search for papers that explored the meaning of Open AI and those that investigated the principles of responsible use of AI in education, and ethics of AI in education. It was found that there was a total of 55 articles among the three most significant academic websites, Web of Science, Google Scholar, and ResearchGate. After that, another round of filtering was done on the articles to isolate the ones that discussed the ethics of AI in education, and the responsible use of Chat GPT. In the end, a total of 23 publications were selected to include in the study and do the subsequent analysis (see figure 2). These specific articles were the key sources of information that were used to create the findings that were supplied and spoken about in this research. Following the completion of the investigation, a procedure known as thematic data analysis was performed on the many problems that were discovered to categorize them into themes. The procedure that was utilized to get the articles posted on a variety of reliable websites is broken down into steps and depicted in the diagram that can be found below in Figure 1.

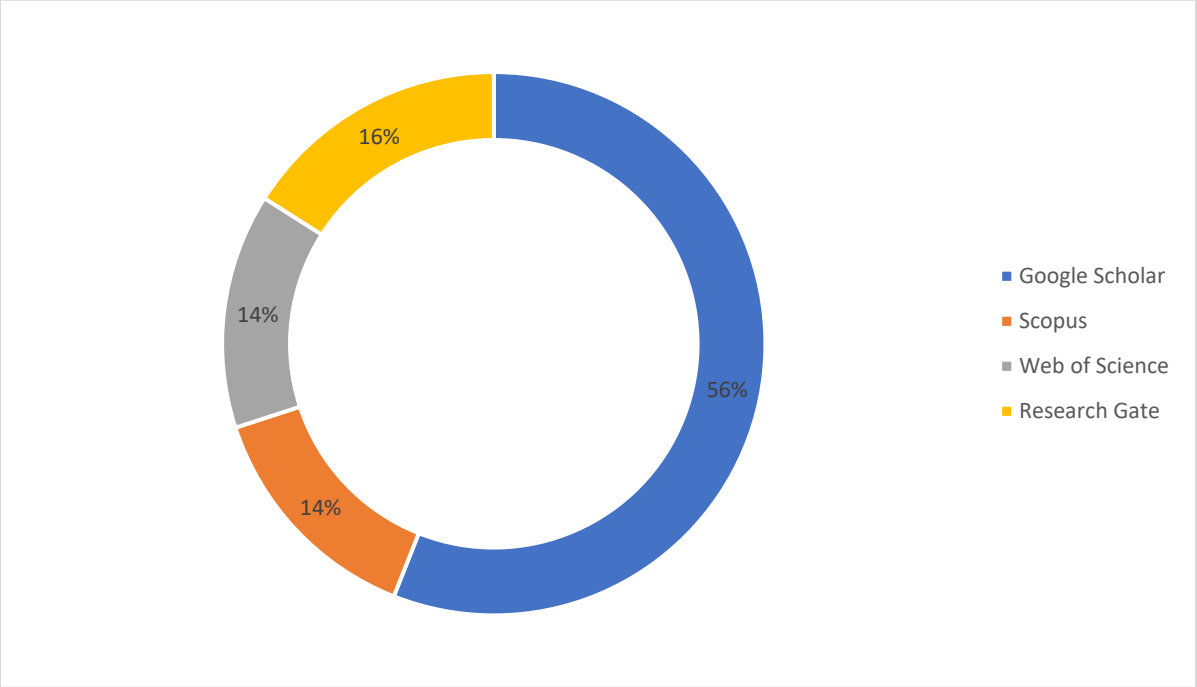
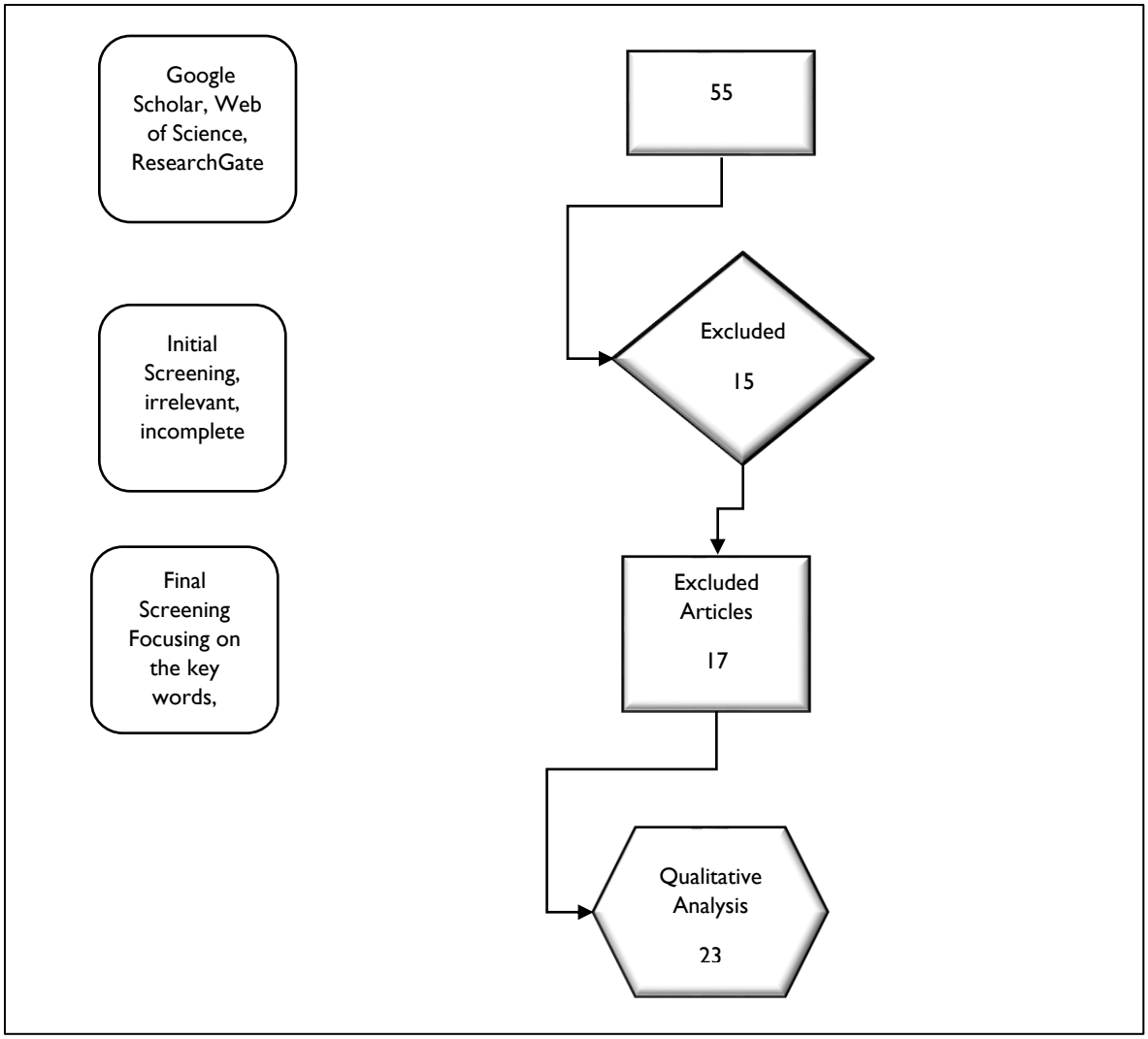


Figure 1: Articles used from Various Sites

Figure 1 above is outlining the distribution of articles across various sites like google scholar, Scopus, and research gate. Figure 2 explains the process followed to include and exclude other articles.



Source: Author's Analysis

Figure 2 outlines the steps that were used to determine which articles to include and which to omit. It details the websites, such as Google Scholar, Web of Science, and ResearchGate, from which the original documents were collected, as well as the screenings that were performed initially and ultimately.

Table 1: Selected Articles Consulted in the Study

Study	Focus	Year
Rodgers, W., Murray, J. M., Stefanidis, A., Degbey, W. Y., & Tarba, S. Y.	*An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes.*	*2023*
Thurzo, A., Strunga, M., Urban, R., Surovková, J., & Afrashtehfar, K. I.	*Impact of Artificial Intelligence on Dental Education: A Review and Guide for Curriculum Update.*	*2023*

Haluza, D., & Jungwirth, D.	*Artificial Intelligence and ten societal megatrends: a GPT-3 case study*	
Rudolph, J., Tan, S., & Tan, S.	*ChatGPT: Bullshit spewer or the end of traditional assessments in higher education?.*	*2023*
Qadir, J.	*Engineering Education in the Era of ChatGPT*	*2022*
Paulus, M. J., & Langford, M. D. (Eds.).	*AI, Faith, and the Future: An Interdisciplinary Approach.*	*2022*
Myskja, B. K.	*Technology and Trust–A Kantian Approach. In Technology Ethics*	*2023*
Mhlanga, D.	*Rethinking Education in the Industry 4.0 in Africa, the Effective Management and Leadership of Education Post-COVID-19 Pandemic Towards Digital Transformation*	*2022*

The documents that were selected to be included in the investigation are listed in the table above. The table only represents a small sample of the total number of publications that were taken into account for the research.

A Brief History of OpenAI and ChatGTP

OpenAI is a research laboratory for artificial intelligence that was founded in San Francisco to promote and create "friendly AI" for the benefit of humans. When the company was first launched, prominent figures in the technology industry like as Elon Musk, Reid Hoffman, Peter Thiel, Greg Brockman, and Sam Altman were among those responsible for launching it. While Altman is the Chief Executive Officer of OpenAI now, Brockman acts as the company's President. It is stated in the mission statement for OpenAI that the organization's ultimate goal is to create "artificial general intelligence." Artificial intelligence has the potential to significantly improve many different industries, and the founders of OpenAI believe that it should be developed safely and beneficially, with open-source software and advanced AI tools being available without restrictions based on intellectual property. In addition, they believe that artificial intelligence should be developed in a manner that will allow it to significantly improve many different industries. OpenAI became a for-profit company in 2019, after having previously operated as a nonprofit organization. As a part of this move, Microsoft made an investment of one billion dollars in OpenAI, and OpenAI licensed its most recent language model, GPT-3, solely to Microsoft. Both of these events took place in 2018. Since that time, Microsoft has increased its prior investment in OpenAI by an additional $2 billion, and the corporation is currently in discussions to increase that investment by an additional $10 billion. The shift in OpenAI's approach to finance has cast questions on the organization's commitment to democratizing artificial intelligence as well as its openness and transparency throughout the process. The most cutting-edge and potent language model that has ever been produced is GPT-3, which was made available to the public in the year 2020. It does this by employing a technique known as deep learning to produce text.

Chat GPT The Meaning

The ChatGPT language model was developed by OpenAI, which is widely recognized as one of the most influential organizations in the field of artificial intelligence research. The architecture known as GPT (Generative Pretrained Transformer), which was initially introduced by OpenAI in 2018, serves as the basis for this system. The first version of the GPT model was trained on a vast amount of text data obtained from the internet by utilizing a deep learning technique known as transformers. This training took place on data acquired from the internet. It was able to generate text that was almost indistinguishable from writing done by humans as a result of this. OpenAI decided to create GPT-2, which is a substantially improved and more resilient iteration of the GPT model, because of the tremendous success that the first version of the GPT model experienced. Despite this, OpenAI has decided not to make the full version of GPT-2 available to the public because of worries surrounding the model's potential for inappropriate use. In the year 2020, OpenAI made available the GPT-3 language model for the public to use. It is the most advanced language model that has ever been created and can perform a wide variety of tasks that involve the processing of natural languages. Some examples of these tasks include the translation of languages, the summarization of information, the answering of questions, and the generation of text. The ChatGPT test is a variant of the GPT-3 protocol that has been optimized for conversational tasks such as providing replies to questions presented in natural language. This optimization was accomplished by taking the GPT-3 exam and modifying it specifically for conversational tasks. As a result of this, it is of great use in the development of chatbots and other artificial intelligence applications that involve dialogue (Rudolph et al. 2023). The implementation of ChatGPT in educational settings carries with it the potential to significantly improve students' educational experiences; nevertheless, the technology must be utilized responsibly and ethically. This involves making sure that students continue to develop their ability to think critically and find solutions to problems, as well as taking steps to reduce any existing prejudices and forms of discrimination. The responsible and ethical use of ChatGPT towards lifelong learning is an essential component of the larger discourse on AI ethics. To guarantee that the technology is used in ways that promote beneficial results for students and society, continual research and monitoring are required.

Empirical Literature Review

The Open AI in Education literature review centres its attention on the ethical and appropriate usage of ChatGPT toward the pursuit of lifelong learning. ChatGPT is a cutting-edge language model that was developed by OpenAI. It has been making waves in the world of artificial intelligence (AI) as well as natural language processing (NLP). However, because it is being used more frequently in a wide variety of applications, one of which being education, there is a growing worry regarding the ethical and responsible use of technology of this kind. ChatGPT can completely transform the method by which students acquire knowledge and access information within the realm of education. Students can benefit from learning opportunities that are both tailored to their interests and intellectually stimulating thanks to the capability of the model to produce responses that mimic those of humans. Learning may also be made more accessible to students all around the world because of ChatGPT's capability of handling several languages as well as a wide variety of subject matters. However, the implementation of ChatGPT in educational settings gives rise to questions about the user's ethical and responsible behaviour. Because of its sophisticated artificial intelligence capabilities, ChatGPT runs the potential of reinforcing preexisting prejudices and forms of discrimination, which could result in learning

experiences that are unequal and unfair. In addition, the implementation of such technology in educational settings may cause students to become less adept at critical thinking since they may come to rely excessively on the responses that are generated by AI rather than coming up with their ideas.

Rudolph et al. (2023) argued that ChatGPT is the world's most advanced chatbot so far because, unlike other chatbots, it can create impressive prose within seconds, and it has created much hype and doomsday predictions when it comes to the assessment of students in higher education as well as a variety of other topics. ChatGPT is a state-of-the-art language model, according to Rudolph et al. (2023). It is a variant of OpenAI's Generative Pretrained Transformer (GPT) language model, which was developed to generate writing that is indistinguishable from text written by humans. Rudolph et al. (2023) feel that ChatGPT is capable of engaging in discussion with users in a way that gives the impression of being natural and straightforward. Rudolph et al. (2023) provided a condensed summary of OpenAI's history, which is the organization that developed ChatGPT. We bring attention to the fundamental shift from a model of a not-for-profit organization to one of a commercial enterprise. According to Rudolph et al. (2023), our review is one of the first academic journal publications to be peer-reviewed and investigate the significance of ChatGPT for higher education, particularly in the areas of evaluation, learning, and teaching. Rudolph et al. (2023), focus on the technology's implications for higher education and discuss what the future holds for learning, teaching, and assessment in higher education in the context of artificial intelligence chatbots such as ChatGPT. Rudolph et al. (2023) provided a description of ChatGPT's functionality as well as a summary of its strengths and limitations. Rudolph et al. (2023) examine student-facing, teacher-facing, and system-facing applications, as well as potential dangers in the field of artificial intelligence in education (AIEd). They place ChatGPT into the context of current research on artificial intelligence in education (AIEd).

In the final section of this paper, Rudolph et al. (2023), offer some recommendations for students, professors, and institutions of higher education.

Thurzo et al. (2023) presented an up-to-date summary of the impending changes and a brief study of the influential breakthroughs in the application of AI in dentistry education since the year 2020. This research was published in the journal Dental Education. In addition, Thurzo et al. (2023) presented a manual for an updated dental curriculum that may be used for both undergraduate and postgraduate education. This manual was written in the context of developments in AI applications and the influence these developments have had on dentistry. It shouldn't come as a surprise that the majority of dental educators have limited knowledge and skills to evaluate AI applications because they were not taught to do so, as stated by Thurzo et al. (2023). Additionally, Thurzo et al. (2023) pointed out that recent years have seen exponential growth in the development of AI technologies. According to Thurzo and colleagues (2023), factual reliability and opportunities with OpenAI Inc.'s ChatGPT are regarded as crucial turning moments in the era of generative artificial intelligence (AI). According to Thurzo et al. (2023), when advanced deep-learning algorithms take over the clinical fields of dentistry and redefine diagnosis, treatment planning, management, and telemedicine screening, it is inevitable that dental institution curricula will need to be updated. According to Thurzo et al. (2023), recent advancements in AI language models will cause a shift in how dentists communicate with their patients. As a result, the

fundamentals of dental education, such as the writing of essays, theses, or scientific papers, would need to be modified.

On the other hand, Thurzo et al. (2023) suggest that there is a rising worry about its ethical and legal consequences and that greater consensus is required for the safe and responsible deployment of AI in dental education. Pfeffer et al. (no date) argued that large language models represent a significant advancement in the field of artificial intelligence, with the underlying technology as the key to further innovations. Large language models are here to stay, despite critical views and even bans within communities and regions. Pfeffer et al. (no date) addressed the possible benefits and problems of educational uses of large language models, from the perspectives of both students and teachers. The authors focused on the benefits of using large language models. Pfeffer and colleagues (no date given) talked about the current state of massive language models and the uses that they have. After that, we focus on how these models might be utilized to produce educational content, enhance student engagement and interaction, and tailor learning experiences. Pfeffer et al. (no date) argue that large language models in education demand both educators and students to create sets of areas of expertise and information literacy necessary to comprehend the technology as well as the constraints and unexpected brittleness of such systems. This is about the challenges that are presented. In addition, Pfeffer and colleagues (no date) argued that a clear strategy within school institutions and a clear teaching approach with a strong concentration on critical thinking and strategies for fact-checking are required to integrate and make full use of large language models in classroom styles and teaching curricula. This is necessary to take full advantage of the benefits that large language models offer. Pfeffer et al. (no date) also presented other obstacles, some of which are not exclusive to the application of AI in education. These challenges include the potential for bias in the output, the requirement of continual human monitoring, and the potential for misuse. Pfeffer et al. (no date) feel that if these difficulties are handled wisely, they can offer insights and possibilities in education settings to acquaint students with potential social biases, criticalities, and risks of AI application early on in their academic careers.

According to Qadir (2022), engineering education is perpetually changing to keep pace with the most recent advances in technology and to adapt to the shifting requirements of the engineering industry. According to Qadir (2022), the application of generative artificial intelligence technologies in this industry, such as the ChatGPT conversational agent, is one of the exciting developments that has recently taken place. Students can receive individualized feedback and explanations with ChatGPT, which also enables the creation of realistic virtual simulations for hands-on learning opportunities. This has the potential to make students' educational experiences more productive and personalized. Qadir (2022), on the other hand, believes that it is necessary to take into account the constraints imposed by this technology. According to Qadir (2022), ChatGPT and other generative AI systems are only as good as the data that they use to train themselves, and they may perpetuate biases or even generate and propagate false information. In addition, Qadir (2022) argued that the use of generative AI in education raises ethical concerns. These concerns include the possibility that students will use the technology in an unethical or dishonest manner, as well as the possibility that humans will become unemployed as a result of technology rendering their jobs obsolete. In conclusion, Qadir (2022) believes that engineering educators must comprehend the implications of this innovation and study how to make adjustments to the engineering education ecosystem to ensure that the next generation of

engineers will be able to realize the benefits offered by generative AI while minimizing any negative consequences. Qadir's research was published in the journal Engineering Education and Research in 2022.

Zhuo et al. (2023) claimed that recent advances in natural language processing have made it possible to synthesize and comprehend coherent text in an open-ended manner. This has allowed the theoretical techniques to be translated into practical implementations. According to Zhuo et al. (2023), the huge language model has had a substantial impact on a variety of enterprises, including those that develop a report summarizing software and copywriters. Large language models may exhibit social prejudice and toxicity, as suggested by the findings of Zhuo et al. (2023), which poses ethical and societal hazards in the form of consequences deriving from irresponsibility. As a result, large-scale standards for accountable big language models must be constructed following the recommendations made by Zhuo et al (2023). Zhuo et al. (2023) further educate future efforts on responsibly constructing ethical large language models, we perform a qualitative research method on OpenAI's ChatGPT to better understand the practical features of ethical dangers in recent large language models. Zhuo et al. (2023) further educate future efforts on constructing ethical large language models. The potential of artificial intelligence (AI) to address social megatrends was also investigated by Haluza and Jungwirth (2023), with a particular emphasis on OpenAI's Generative Pre-Trained Transformer 3 as the subject of their research (GPT-3).

To accomplish this, Haluza and Jungwirth (2023) utilized GPT-3 to investigate the potential benefits of AI in the context of digitization, urbanization, globalization, climate change, automation and mobility, global health challenges, and an ageing population. Within the scope of this study, Haluza and Jungwirth (2023) considered not only the topic of sustainability but also that of rising markets. The only way to interact with GPT-3 was through a series of predetermined questions, and the responses it generated were examined. According to the findings presented by Haluza and Jungwirth (2023), AI has the potential to considerably enhance our comprehension of these tendencies by illuminating how their manifestations evolve and suggesting potential responses to the challenges they provide. Further, Haluza and Jungwirth (2023) claimed that more research is required to assess how effective AI will be in successfully tackling these challenges; nonetheless, the first findings are encouraging. According to Haluza and Jungwirth (2023), additional research needs to be conducted to determine how to make the most effective use of emerging technologies such as GPT-3 when addressing these difficulties. Last but not least, Haluza and Jungwirth (2023) concluded that while there is still a great deal of work to be done before any tangible effects can be seen from utilizing AI tools such as GPT-3 on societal mega-trends, early indications suggest that it may have a positive impact if used correctly. This is although there is still a great deal of work left to be done before any such effects can be seen.

Use of ChatGPT for education: Challenges

It is one of the key reasons why the use of ChatGPT for grading written tasks is discouraged because of the potential threat that it poses to more conventional methods of assessing written work, such as essays. Some educators are afraid that students will outsource their work to ChatGPT because the platform can rapidly generate acceptable text. This makes it more difficult to identify instances of plagiarism, which causes some educators to be concerned (Rudolph et al.

2023). However, this may be due to a reluctance to alter the methods that are used to evaluate the learning of students. Written assignments are commonly criticized for being uninteresting and ineffective in determining students' levels of knowledge and skills; however, this may be due to a reluctance to modify the methods that are used to evaluate the learning of students. Another issue that causes some cause for concern is the fact that ChatGPT, which is effectively just a text-generating machine, does not grasp the information it generates, nor does it judge whether or not it is accurate or relevant. It is feasible that this will result in regulations that ban its utilization; nevertheless, it is also conceivable that ChatGPT technology will become ubiquitous before institutions have the time to alter their policies. An approach that focuses on correcting the issues that have been caused by ChatGPT while also taking into account the potential benefits and drawbacks of the platform would be more effective. When an educational piece of technology that has the potential to revolutionize the field is made available to the public, it is the responsibility of educators and policymakers to address any problems that may arise as a result of its implementation and to devise strategies to do away with educational practices that are inefficient. The instance of a Chinese schoolgirl who used a machine to copy enormous amounts of text serves as an illustration of how important it is to develop a responsible approach when making use of technology in educational settings.

Use of ChatGPT for Education: Opportunities

The fact that ChatGPT is capable of writing essays paves the opportunity for fresh and innovative methods to be used in educational settings. Many specialists in the field, such as McMurtrie (2022) and Sharples (2022), believe that artificial intelligence (AI) technologies, such as ChatGPT, will soon be a vital component of education, and they propose making use of technology to enhance learning. One way that assessment procedures can be improved is by giving teachers the tools they need to use testing both as a tool for learning and as a means of learning itself. In addition, ChatGPT can be leveraged to build teaching approaches, boost student participation and teamwork, and promote hands-on, experiential learning. Even though ChatGPT is a technology that can be considered disruptive, it presents a tremendous opportunity to modernize the educational system. In a word, the implementation of ChatGPT in the context of an educational institution brings with it a wide range of opportunities as well as challenges for teachers. The capability of ChatGPT to generate essays is seen by some as a potential risk to traditional methods of evaluating students, but it also gives teachers the chance to develop brand-new approaches to testing students' knowledge and skills. It is possible to use ChatGPT to improve the evaluation capabilities of instructors, stimulate collaboration and teamwork among students, and give students more possibilities to learn via trial and experience. In conclusion, ChatGPT is a technology that is considered as being disruptive in the education sector; nonetheless, it has the potential to transform education via innovation.

Responsible And Ethical Use of ChatGPT in Education

To ensure that ChatGPT is utilized in a manner that is safe, fair, and courteous to students, instructors, and all other stakeholders, it is necessary to adhere to responsible and ethical practices while implementing the technology in educational settings. The application of artificial intelligence (AI) technology in educational settings, such as ChatGPT, can bring about a great many benefits; nevertheless, it also raises problems regarding ethics and responsibility.

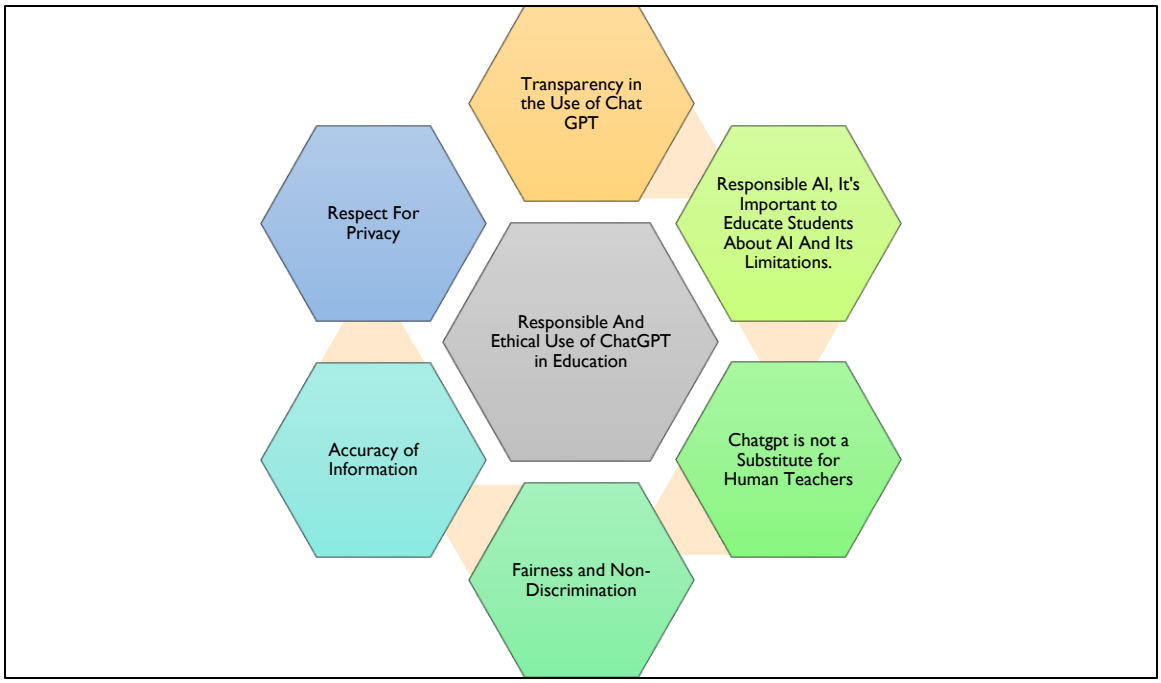


Figure 2: Responsible and Ethical Use of ChatGPT in Education

The obligations and ethical usage of ChatGPT in the education sector are outlined in the figure that can be found above labelled as Figure 2. These responsibilities include respect for privacy, fairness and non-discrimination, transparency in the use of ChatGPT, and a few more.

Respect For Privacy

To start, protecting the privacy of users' data is a primary priority. Because ChatGPT is trained on enormous volumes of data obtained from the internet, it is essential to ensure that the personal data of students is safeguarded and not put to inappropriate use. Before using ChatGPT in the classroom, educators should inform students about how their data is gathered, used, and kept and acquire their consent. In addition, students should be aware of the security measures that are in place to protect their data. When it comes to the application of ChatGPT in the realm of education, the protection of users' personal information is an essential concern. It is imperative that the confidentiality of all individuals participating in the educational process, including students, teachers, and anybody else, is always maintained. The General Data Protection Regulation (GDPR) in Europe and the Children's Online Privacy Protection Act (COPPA) in the United States both require organizations to protect the personal data of individuals (Botha et al. 2017, Berger 2022). These laws are similar in that they require organizations to do whatever they can to protect the personal data of individuals, including students. This comprises student information, grades, and assessment results that were gathered through the use of ChatGPT in the educational setting. Should one fail to preserve sensitive data, one may face serious repercussions in both the legal and financial spheres.

Again, the usage of ChatGPT in educational settings frequently entails the communication of private information, such as grades, student performance, and personal particulars. To maintain the confidentiality of the individuals who are involved, it is necessary to prevent unauthorized access to, use of, or disclosure of the information in question. When it comes to the learning process, trust is an essential component (Tartavulea et al. 2020, Myskja 2023). When students, teachers, and other individuals participating in education have faith that the confidentiality of their personal information will be maintained, they are more likely to give their full attention and participation to the learning process. On the other side, if a person's right to privacy is violated in any way, the trust may be broken, which may have a detrimental effect not only on the outcomes of learning but also on overall contentment. The use of ChatGPT in educational settings should be conceived of and carried out in a manner that is consistent with ethical principles such as informed consent, transparency, and accountability. Respecting individuals' right to privacy is an ethical obligation because it demonstrates respect for individuals and their rights. When it comes to the educational use of ChatGPT, protecting users' privacy is of the utmost importance. It is necessary to take appropriate safeguards to safeguard the personal data of those involved in the educational process, to maintain trust, and to ensure that the use of ChatGPT is consistent with ethical principles. These three goals must be met for ChatGPT to be used ethically.

Fairness and Non-Discrimination

It is possible for ChatGPT to exhibit bias, particularly in the language that it was trained on. It is essential to be aware of this, as well as to provide a suitable context when utilizing ChatGPT in the classroom setting. The potential for harm should also be brought to the attention of educators, particularly if ChatGPT is used as a grading or evaluation tool for pupils. Students shall not be subjected to bias, discrimination, or unfair treatment because of their use of ChatGPT, regardless of variables such as their colour, gender, or socioeconomic background. Because AI algorithms like ChatGPT can perpetuate and magnify existing biases, prejudices, and discrimination, fairness and non-discrimination must be strictly adhered to whenever ChatGPT is used in educational settings. Pupils may be treated unfairly and unequally if these biases are not recognized and remedied immediately. As a result, it is essential to make certain that ChatGPT and other AI systems are conceived, developed, and used in a fair and non-discriminatory manner at every stage of the process. Consider the possibility of using ChatGPT to assign grades to student essays, for instance. Students who come from underrepresented groups may have their essays receive unjust grades because the training data that was used to train ChatGPT was skewed toward a certain set of people. This could lead to more marginalization of populations that are already at a disadvantage in terms of education and could further exacerbate existing educational gaps. Furthermore, language models like ChatGPT can propagate and magnify unwanted preconceptions, biases, and prejudices. This is a risk that comes with using these models. When employed in educational contexts, ChatGPT may provide responses that are prejudiced and discriminatory, for instance, if the training data that was used to train it had unfavourable prejudices about particular groups. Students, instructors, and other members of the educational community may suffer because of this. Because of this, it is essential to conduct an in-depth analysis of artificial intelligence (AI) systems such as ChatGPT and address the possibility of discrimination and bias before implementing them in educational contexts.

Chatgpt is not a Substitute for Human Teachers

ChatGPT is not intended to replace in-person instruction from qualified instructors. It ought to be regarded as a device that supplements classroom instruction and student learning rather than one that supplants it. Rather than depending solely on the AI tool to carry out all of the necessary tasks, teachers should utilize ChatGPT in a manner that improves their methods of instruction and encourages students to engage in analytical and critical thinking. In recent years, there has been a lot of discussion over the application of artificial intelligence, such as ChatGPT, in the classroom setting. It is important to note that even though ChatGPT presents several opportunities for improvement in educational settings, it is not intended to take the place of actual instructors. This is true for several different reasons, all of which are valid. The human connection that exists between an instructor and a student can never be replaced by ChatGPT. The relationship that exists between a teacher and their pupils is among the most essential components of the educational process. Teachers can create connections with their pupils and gain an understanding of the student's particular requirements, as well as their strengths and weaknesses (Kim 2020, Attard & Holmes 2020, Alam 2022). On the other hand, ChatGPT is only a machine that is incapable of developing meaningful connections with its users (the students). The goal of education should not be limited to the dissemination of information but should also include the cultivation of interpersonal ties and relationships. It is largely up to the teachers to establish an atmosphere in the classroom that is encouraging and welcoming to students of all backgrounds. Because it is an AI language model, ChatGPT does not possess the emotional intelligence, empathy, or interpersonal skills that human teachers do. Because of this, it is difficult for ChatGPT to comprehend the unique requirements of each student, to offer individualized assistance, and to produce a learning environment that is positive and engaging. Creativity and analytical thinking are not strong points of ChatGPT. Teachers receive training to develop their creative and critical thinking skills, which enables them to provide individualized support and direction to the students in their classrooms. On the other hand, ChatGPT is constrained by the programming and algorithms that it uses, and as a result, it is unable to think creatively or critically in the same way that a human instructor can. The field of education is always shifting and developing(Mhlanga 2021, Mhlanga 2022, Mhlanga 2023). The ever-evolving requirements of students can be accommodated by human instructors, who can also add novel concepts and strategies into their lessons and adjust their approach to instruction in response to the comments and suggestions of their pupils. On the other hand, ChatGPT operates based on the data it was trained on and is unable to alter its approach to match the particular requirements of individual students or courses.

ChatGPT is not Capable of Comprehending The Surrounding Context.

In the field of education, it is frequently vital to have a solid understanding of the environment in which a student is functioning to offer the most pertinent assistance and direction (Mahoney et al. 2021, Alam 2022). This context takes into account the student's culture, background, and the experiences they've had throughout their life (Mahoney et al. 2021, Alam 2022 Adams et al.2022). ChatGPT, being a machine, is not capable of comprehending or appreciating these aspects in the same manner that a human educator can do so. To reiterate, ChatGPT is unable to deliver either hands-on training or experiential education. The greatest way for many children to learn is through opportunities for hands-on and experiential learning (LeBaron et al. 2019, Jacobs 2020). It is in the best position of those who teach to provide these possibilities, and they can do so with hands-on projects, laboratory experiments, or field trips learning (LeBaron et al. 2019, Jacobs

2020). On the other hand, ChatGPT is not able to deliver these kinds of educational opportunities as effectively as other platforms can. Creativity, invention, and originality are all things that can be brought to the classroom by human teachers. They are capable of developing interesting courses, employing unique teaching approaches, and encouraging students to think critically and creatively outside of the box. Because it is an AI model, ChatGPT functions according to pre-programmed algorithms and does not have the same level of creativity and originality as human instructors have. In conclusion, although ChatGPT has the prospective to play a part in the field of education, it should not be seen as a replacement for actual teachers. The talents, experiences, and points of view that human teachers bring into the classroom cannot be reproduced by a machine in any way, shape, or form. It is essential to be aware of the constraints imposed by ChatGPT and to make certain that the platform is applied in ways that complement and do not supplant the role of human educators.

Responsible AI, It's Important to Educate Students About AI And Its Limitations.

Students need to be aware that ChatGPT is not a sentient creature but rather an artificial intelligence model with the ability to generate text. Students should be encouraged to challenge the output of ChatGPT, and teachers should assist students in developing a critical and educated viewpoint on the application of artificial intelligence in the classroom. When using ChatGPT in the classroom, it is essential to educate students about artificial intelligence (AI) as well as the limitations of AI for several reasons. To begin, artificial intelligence (AI) systems such as ChatGPT are not flawless, and students must understand the limitations and biases that these systems have. For instance, ChatGPT was trained on a massive body of textual material sourced from the internet, which may contain information that is unreliable, biased, or deceptive. As a consequence of this, pupils need to be able to conduct an in-depth analysis of the data that is produced by ChatGPT and comprehend how to discriminate between genuine and unreliable sources of information. Second, students need to understand the potential ethical and social ramifications that artificial intelligence could have. For instance, if ChatGPT is used to assess students' essays or provide feedback to them, there is a possibility that it will perpetuate existing biases and prolong unfairness. This is a risk that ChatGPT poses. Students have a responsibility to be aware of these problems and to comprehend the various solutions available. Third, for students to successfully traverse a technological landscape that is always evolving, they need to be prepared with the knowledge and skills necessary to do so.

Students need to understand how artificial intelligence works, as well as its capabilities and limitations since AI continues to progress and become more pervasive (Wong et al. 2020, Alam 2022). Because of this, they will be equipped with the knowledge and abilities necessary to make educated judgments regarding the application of AI in their future employment and their personal lives. Last but not least, educators can contribute to the development of a more educated and responsible connection between humans and AI by teaching students about the limitations of AI. This can help ensure that AI is employed in a way that is not only safe but also ethical and useful to society. Educating students about artificial intelligence (AI) and the limitations of AI is important for the development of critical thinking, the promotion of ethical and responsible use of AI, and the equipping of students with the skills and knowledge they need to navigate a technological landscape that is rapidly changing.

Transparency in the Use of Chat GPT

It is also essential to be open and honest about the implementation of ChatGPT in educational settings and to offer frequent forums in which students and teachers can debate the moral and responsible application of artificial intelligence (AI). This can take the form of recurring workshops, discussion groups, or forums, at which participants can ruminate on the merits and drawbacks of utilizing AI in educational settings, as well as formulate suggestions for its responsible and ethical application. Because it guarantees that students, professors, and educational institutions understand how the technology works and what it is capable of doing, transparency is a crucial feature of adopting ChatGPT in education. Both students and teachers must understand how artificial intelligence technology such as ChatGPT processes information and creates responses before implementing the technology in educational settings. This assists in the elimination of any ambiguities or misconceptions that may develop and ensures that the technology is used ethically and responsibly(Mhlanga 2022 Rodgers et al. 2023). In the context of education, examples of transparent use of ChatGPT could include informing students about the algorithms and data sources used by the technology, as well as describing how it processes and creates responses.

This knowledge may be made accessible in a variety of formats, such as educational materials or guides for academic institutions and their respective students and professors. In addition, educational institutions can make it a priority to utilize open-source or transparent AI technology to ensure that students and teachers have access to the source code and underlying data. This can be accomplished by making the adoption of open-source or transparent AI technology a priority. The provision of students with a clear explanation of the potential biases and limitations of the technology used in the classroom is another illustration of the transparent nature of the use of ChatGPT in educational settings. It is essential, for instance, that students be made aware of the fact that artificial intelligence algorithms, such as ChatGPT, are only as objective as the data they are trained on. The replies that are generated by the technology are susceptible to reflecting any biases that may be present in the training data. Students can be better prepared to critically analyze and comprehend the replies generated by ChatGPT if they are educated about the constraints described here and how they apply. Transparency is of the utmost importance while utilizing ChatGPT in educational settings because it not only assists in fostering an ethical and responsible utilization of the technology but also provides students with a better comprehension of the latter's capabilities and restrictions. This gives students the ability to use ChatGPT in an informed manner and also ensures that the technology is utilized in a manner that is in line with the core values and guiding principles of the educational establishment in which they are enrolled. In conclusion, the use of ChatGPT in education that is responsible and ethical needs an understanding of potential biases and limitations, security of students' data, transparency in its usage, and critical evaluation of the influence it has on the teaching and learning process. It is the role of educators to assist students in forming well-informed and analytical viewpoints on artificial intelligence (AI) and to utilize AI technologies such as ChatGPT in a manner that supplements, rather than replaces, their teaching.

Accuracy of Information

The accuracy of the information is very significant in the field of education since it guarantees that the material that is being taught and learned is accurate, trustworthy, and credible. When it comes to the instruction of scientific principles, providing accurate information is quite necessary, as providing the material that is not accurate might lead to misunderstandings and misconceptions. For instance, if a student is taught that the world is flat, they will have an incorrect grasp of geography, astronomy, and any other relevant disciplines that are taught in conjunction with this topic. Accurate knowledge is necessary for history lectures to comprehend the significance of the past to the present and how it has evolved. If a student is led to believe that that the first black president of South Africa was Thabo Mbeki or George Washington served as the first president of France rather than the United States, then that student will have an incorrect grasp of the history of South Africa or the United States. Accuracy is essential in mathematics for both the problem-solving process and the comprehension of mathematical concepts (Al-Mutawah et al. 2019, Santia & Sutawidjadja 2019). If a pupil is taught that adding two and four equals five, then they will struggle to solve arithmetic problems and understand more sophisticated mathematical ideas that build upon this fundamental understanding. As a result, it is essential to make certain that the information that is offered by ChatGPT as well as any other instrument that is utilized in the educational process is accurate. Both teachers and students need to exercise critical thinking when it comes to the information they are given and check it with reliable sources.

Conclusion and Policy Recommendations

Significant shifts have taken place in society, the economy, and the environment as a direct result of the accelerated rate of technological advancement and increased global interconnectedness. In recent years, the field of artificial intelligence has made considerable advancements, which has resulted in the development of cutting-edge technologies like Open AI's ChatGPT. The ChatGPT language model is a cutting-edge piece of technology that can usher in a period of profound transformation within the field of education. This article's goals are to (1) provide a complete evaluation of the responsible and ethical usage of ChatGPT in education, and (2) encourage additional research and discussion on this extremely important topic. The document analytical method was used in the research, and it was found that for ChatGPT to be used in education, it is essential to ensure that privacy is respected, that there is fairness and non-discrimination, that there is transparency in the use of ChatGPT, and that there are a few other conditions outlined in the research. According to the findings of this research, it is advised that all of these ideas be followed to guarantee that the integrity and responsibility of the education sector are preserved all over the world.

Data availability

No Data was analysed in this study.

Competing interests

The authors declare no competing interests.

Ethical approval

This article does not contain any studies with human participants performed by any of the authors. Ethical approval was not relevant.

Informed consent

This article does not contain any studies with human participants performed by any of the authors. Informed consent was not relevant.

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