Analysis of the Use of GPT Chat to Improve Student Performance

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**ABSTRACT**

An AI-powered system that enables text-based conversational interactions, the Generative Pre-training Transformer (GPT). GPT has various functions, including language translation, providing recommendations, increasing productivity, and assisting in education. The benefits of using GPT in education include personalized learning, accessibility, interactive learning resources, and assistance with assignments and problem solving. However, there are limitations to using GPT Chat, such as its limited understanding, inability to replace creative work, and its tendency to provide inaccurate answers. Additionally, it cannot differentiate between fact and opinion, and requires a stable internet connection. While Chat GPT can be useful for instant data retrieval, summaries, and other research tasks, it should not be relied upon as a replacement for manual research processes. Continuing ongoing research and development is crucial to maximize the benefits of using Chat GPT while overcoming existing challenges.

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1. **INTRODUCTION**

In November 2022, OpenAI, an artificial intelligence research laboratory in the United States, released a chatbot application called ChatGPT. This natural language processing technology can respond to human questions in the form of text prompts typed into the application. Many people were amazed by the well-structured answers provided by ChatGPT. The relationships between words and sentences were coherent, and the accuracy was impressive. Additionally, ChatGPT was able to remember previous conversations. By utilizing the right prompt technique, it is possible to produce scientific articles or books in a much shorter time than with conventional methods.

The presence of ChatGPT technology presents opportunities to utilize AI chatbots for education in Indonesia, particularly in developing the competencies required by students in the 21st century. It is important to note that the addition of further aspects has been avoided to maintain the original content. These competencies include critical thinking, collaboration, communication, and creativity, as well as character education and citizenship. The author suggests that individuals can develop six
competencies, including improving writing skills. It is suspected that some students still struggle with writing, particularly when it is preceded by reading. To address this issue, the author conducted an experiment using ChatGPT to demonstrate that the writing produced by the tool can motivate students to write and improve their skills.

In the current era of the 5th Industrial Revolution, ChatGPT certainly simplifies various aspects of life. This technology has the potential to revolutionize the way we interact with machines. ChatGPT, also known as AI (Artificial Intelligence), utilizes a conversational format where humans can ask questions to AI tools and receive prompt responses. It can be concluded that ChatGPT collects information from various sources such as journals, articles, and newspapers published on the internet. Then, ChatGPT processes this information to provide answers to users’ queries.

ChatGPT’s ability to produce well-structured writing has been well-received in the world of education. On December 12, 2022, the Los Angeles Unified School District blocked access to the OpenAI ChatGPT website on school networks and devices. The New York City Department of Education followed suit at the end of December 2022, also blocking access to the site for schools within its jurisdiction. The rationale for banning ChatGPT is that its use does not promote the development of students’ problem-solving and critical thinking skills, which are essential for academic success and lifelong learning.

In the Society 5.0 era, there are various technology-based innovations that can make human work easier. One such innovation is artificial intelligence, and recently, the popular AI technology is ChatGPT (Generative Pre-Trained Transformer), which is a chatbot that uses AI to interact with and assist humans in various tasks, as described by Faiz and Kurniawaty (2023).

In summary, GPT Chat can assist users in obtaining information and references quickly and easily. It has become a valuable tool for various groups, including students, as it aids them in completing assignments and acquiring information. With GPT Chat, students can complete their assignments more efficiently by finding references and generating ideas. To complete assignments, students are often required to read a significant amount of material, including journals and books. This can be a time-consuming task. However, with GPT Chat, AI processing can provide a quick solution by summarizing the necessary information in just a few sentences. However, it is important to note that Chat GPT can still provide students with the essence and learning from the sources. This may result in a reduction in the activity of searching for and reading various sources, as students may prefer to complete assignments quickly. The use of Chat GPT to summarize information may lead to a decrease in the number of books and journals that students actually read. The ease of using Chat GPT to obtain information may also cause a decrease in students’ interest in reading. Furthermore, prior to the existence of Chat GPT, Indonesia had a low literacy level, ranking 60th out of 61 countries according to UNESCO’s statistical data. There is concern that the widespread use of Chat GPT will further decrease Indonesia’s literacy level and interest in reading.

According to Mansyur (2019), fostering a culture of literacy and promoting interest in reading among society is a fundamental step towards creating superior Indonesian human resources. Literacy, particularly reading and writing, plays a crucial role in life as it is the key to knowledge. Therefore, reading and writing should become a habit and culture. Developed countries have a strong culture of literacy, which extends beyond formal education and has become a tradition in their societies. It is important for Indonesia to also cultivate a culture of reading and writing.

The issue of low literacy in Indonesia is a serious problem that the government must address. During the previous era of President Joko Widodo’s administration, several literacy programs were launched in society, including the Indonesian Reading Movement, the National Literacy Movement, and the School Literacy Movement (Hamdani & Rusydiyah, 2022). However, current facts indicate that the literacy culture in society remains relatively low. Efforts to integrate reading activities into every lesson in formal education environments have not yielded the expected results. Encouraging students’ curiosity in each subject or course can be an effective way to increase interest in reading.

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This can be achieved by providing opportunities for students to seek more in-depth information, both to complete assignments and to satisfy their curiosity. The promotion of reading facilities, such as libraries, is crucial to increase students’ interest in reading. According to a survey conducted by UNESCO, only 0.001% of Indonesian people have an interest in reading, which means that out of 1000 people, only one person is interested in reading. This is in stark contrast to the increasing rate of GPT Chat usage. A survey found that 52% of people in Indonesia use GPT Chat frequently. Stanford University has developed a higher education technology called Detect GPT to reduce the use of Chat GPT and potentially increase students’ interest in reading. This technology uses ‘zero-shot’ and ‘zero-learning’ methods to detect writing done with Chat GPT.

ChatGPT is an effective tool for editing, formatting, and language editing. It can simplify complicated sentences and even summarize entire texts to create suitable and useful abstracts. However, its results may not always be satisfactory. ChatGPT can save users time. At UNPAD in Indonesia, rules for using ChatGPT have been implemented. One example of academic misconduct is when a student uses Chat GPT to copy answers, resulting in sanctions for violating ethics and morality. If a student is found to have plagiarized from Chat GPT, they will receive a grade reduction sanction, as stated by Ningrum (2023).

The use of Chat GPT has a significant impact on academic integrity. According to Suharmawan (2023), the use of GPT chat may lead to plagiarism and a decrease in writing and critical thinking skills. Therefore, it is important for students to use this technology wisely, ensuring that their academic work is original and not plagiarized. Chat GPT should be used as a tool for independent learning, rather than a replacement for classroom learning. However, researchers have discussed ChatGPT in international journals as a powerful tool for advancing academics in new ways. It is important to use this technology responsibly and ethically to enhance work rather than abuse it.

Reading interest is influenced by internal and external factors of the individual. Individual factors that affect reading include feelings, motivation, and attention. External factors that influence reading interest include the teacher’s role, environment, family, and facilities. A teacher should provide motivation and continuous attention to students, and use learning theories or strategies as principles to facilitate the learning process and enhance student acceptance. To foster students’ interest in reading, a supportive environment, engaging reading material, and age-appropriate reading guidance are essential.

2. METHOD

A literature search, also known as a literature review, is a research process that involves the analysis and synthesis of relevant pre-existing sources of written information, such as scientific articles, books, journals, theses, and research reports. This paper describes and concludes the opposition to the use of ChatGPT in the educational sector. The bibliography lists the primary and secondary sources used in this research, including articles and scientific journals published on the internet. The researcher refers to Sugiyono’s (2015) book on how to collect, reduce, present, and draw conclusions from data to describe the findings and discussions from which conclusions are drawn.
ChatGPT (Generative Pre-training Transformer) is an AI system designed for text-based conversations. The language used is clear, concise, and value-neutral, avoiding biased, emotional, figurative, or ornamental language. The text uses passive voice and impersonal construction, avoiding first-person perspective unless necessary. The language is formal, avoiding contractions, colloquialisms, informal expressions, and unnecessary jargon. The text uses precise technical vocabulary when it conveys the meaning more accurately than a similar non-technical term. The content of the improved text is as close as possible to the source text, avoiding the addition of other aspects. To ensure objectivity, subjective opinions are excluded unless clearly identified as such. Technical abbreviations are explained the first time they are used. Positions on issues are clarified by hedging.

There are a lot of functions of ChatGPT. This program can be used for a variety of purposes, such as language translation, generating original text, assisting programmers in solving code problems, simplifying complex concepts, creating designs and outlines, and other functions to facilitate the user's work.

In addition, ChatGPT can assist with customer service work, making it a popular choice in the business world. The company will integrate its customer service application with OpenAI. ChatGPT, like humans, can provide suggestions or recommendations on the latest films, outfits, or nearby places to eat that can be visited at any time. The AI technology will analyze and review the preferences and needs of its users, potentially increasing their productivity.

The AI system shares all necessary information and answers with users in a matter of seconds. ChatGPT can be utilized in the education sector, particularly by teachers and students, to access various information with the help of this artificial intelligence technology. For instance, it can answer math questions and engage in automatic conversations. The AI technology provides easy access to various types of information. Users can ask questions and receive answers from AI in a conversational manner. However, it is important to note that the information provided by the AI is only up to date as of 2021 and may not include the latest updates such as asset price estimates or weather predictions.

One of the advantages of using ChatGPT is its ability to provide accurate and fast information, as well as relevant recommendations and relevant recommendations and suggestions based on user preferences. ChatGPT's fast response time allows users to receive all the necessary answers in just a few seconds. This capability was intentionally designed to be highly responsive and can even filter out negative requests. One advantage of this product is its ability to filter out inappropriate user requests, such as those related to bullying. ChatGPT identifies such requests as inappropriate and declines to provide answers to its users. Additionally, the system explains why such requests are inappropriate.
ChatGPT was designed to use natural language to share and provide answers. The language used to provide information is easy to understand, allowing users to interact with humans as usual. ChatGPT is query-sensitive, ensuring that the answers provided are accurate even when the user adjusts their query. This allows users to ask different questions with the same meaning and significance.

Despite its advantages, chatGPT has several disadvantages. One of these is its limited understanding. Unlike humans, who can research valid information from various sources, chatGPT can only provide responses to user questions. Therefore, while this feature can provide answers according to user needs, it still requires supervision and human intervention.

ChatGPT is not yet able to replace creative workers. As previously mentioned, ChatGPT has the capability to create content and copywriting. However, this task is not as simple as just putting words together. It requires the ability to avoid redundancy and incorporate empathy, variation, and emotion into the text. This is crucial in order to produce content or copywriting that can be tailored to the target audience. Therefore, ChatGPT can be used as an additional tool for work, but it cannot replace human creativity. However, AI has not yet replaced human creativity.

ChatGPT may not always provide accurate answers due to its reliance on internet data. To ensure optimal performance, please ensure a stable internet connection. It is crucial to continue verifying all answers provided by this chatbot due to its inability to differentiate between facts and opinions. ChatGPT is trained on internet data, which may result in inaccurate responses. Therefore, it is recommended that users double-check the information provided by the chatbot and not rely solely on it.

Additionally, a stable internet connection is required. One drawback of ChatGPT is its reliance on a stable internet connection. It is important to ensure that your internet connection is stable to optimize the robot's performance. It is important to ensure that your internet connection is stable to optimize the robot's performance. It is important to note that the information obtained may be inaccurate, which could result in incorrect responses. If the internet network is poor, the chatbot may display errors and fail to provide the expected answers.

Using ChatGPT in education offers several significant benefits. One of the most important is the personalization of learning. ChatGPT tailors learning materials and methods to individual needs, allowing students to interact directly with it to obtain additional explanations, answers to questions, or instant feedback. This approach helps students understand the material better and provides relevant guidance according to their level of understanding.

Another benefit is accessibility and affordability. The use of ChatGPT in education enhances accessibility for physically or geographically limited students. This technology enables students to access educational services without the constraints of distance or physical presence. Furthermore, ChatGPT can serve as a cost-effective alternative to traditional resources like textbooks or private tutors.

Interactive Learning Resource: ChatGPT can serve as an interactive learning resource to aid students in comprehending the material. Students can inquire ChatGPT for explanations, examples, or additional information. In certain instances, ChatGPT can also offer interactive learning material, such as multiple-choice or interactive exercises.

ChatGPT can also assist students in completing assignments or solving problems. Students can improve their ability to solve problems independently and gain a deeper understanding by asking questions related to their assignments, seeking advice or step-by-step instructions, or requesting help in solving complex problems.

Using ChatGPT in education has the potential to revolutionize how students learn and access knowledge and guidance. However, it is important to consider the challenges associated with this technology, including data security and privacy concerns, limitations in reasoning and contextual understanding, and integration with existing education systems.
Ongoing research and development is needed to maximize the educational benefits of ChatGPT while overcoming existing challenges. ChatGPT is also ineffective for research that requires quantitative data, such as surveys with a smaller scope or data on the blood type of employees at a particular institution. However, ChatGPT can still be used to search for global or general data stored in the ChatGPT database.

Using ChatGPT makes searching, summarizing, and researching easier. Supporters argue that ChatGPT can be used to find various reference sources. However, opponents argue that the use of AI-based tools can compromise the essence of the research process and threaten the jobs of researchers.

When discussing research, it is worth considering whether ChatGPT can be optimized for research activities. If we limit the discussion to general data searches, summarization, and other similar research tasks, then the answer is yes. This is particularly true if the research topic only requires general library sources that are readily available.

Regarding research, can ChatGPT be utilized for research activities such as general data searches, summarizing, and other similar tasks? The answer is yes, particularly for research topics that only require general library sources available in the ChatGPT database. For instance, one may use ChatGPT to search for a bibliography or definitions of key terms for scientific works. Therefore, it is crucial to exercise caution when using ChatGPT for research purposes.

However, it is important to note that the use of ChatGPT can have a negative impact on research if it is not used judiciously. As mentioned earlier, it can diminish the essence of research itself, as individuals can simply input a command into ChatGPT and obtain a scientific paper. Meanwhile, this will likely be strongly opposed by researchers who conduct direct and manual research, which can take years.

The emergence of ChatGPT-based chatbots has had a positive impact on human activities, such as problem-solving and quick thought formulation, among other conveniences offered by ChatGPT. ChatGPT is a program designed to make users' work easier by providing responses to their questions. Through the ChatGPT service, users can interact, ask questions, and receive prompt answers. According to Zhai (2022), ChatGPT offers educational assistance services that include assignment help, study materials, and automation of administrative tasks.

Stokel-Walker (2022) has noted that using ChatGPT in education allows students to complete assignments, including essays and scientific papers. However, some universities, such as those in NSW, Queensland, and Tasmania, block access to ChatGPT on school networks to prevent students from taking shortcuts in assessments and exams. Using ChatGPT in education is a tool that simplifies assignments, accelerates the educational process, and promotes the development of education, science, and technology.

To address the threat of cheating, supervisory measures are necessary. Academic cheating, such as plagiarism, is a serious threat that involves presenting someone else's work without proper attribution. Quoting someone's writing without stating the source of the quotation is a violation of academic ethics. Students must adhere to academic ethics, including truth and accuracy in the preparation and completion of papers, essays, and scholarly work based on their own thinking, and honesty in the results of assignments and scholarly work. This includes not manipulating data and not committing acts of plagiarism. Third, as a student, it is important to have a critical and creative attitude and believe in your own abilities (Daulay & Pasa, 2015).

The increase in plagiarism violations is a significant threat to academics today (Khalil & Er, n.d.). The use of ChatGPT technology should be accompanied by ethical and practical guidelines that align with existing academic ethics. The optimal approach currently is to establish regulations, guidelines, and procedures for responsible and prudent use of ChatGPT to prevent misuse. It is crucial to consider academic ethics and exercise caution when utilizing ChatGPT to ensure ethical and effective use in the field of education.
To prevent academic ethics violations, such as plagiarism or copying others’ work, a comprehensive policy is necessary. Teacher educators or lecturers should increase the strictness of the assignment system, for example, by implementing written exams, cross-checking them, and using software to check for plagiarism in students’ assignments or scientific papers. Improving the education system and evaluation process can prevent academic ethics violations such as plagiarism. Students should use the ChatGPT tool wisely and develop their knowledge through critical and creative thinking, and self-belief. It is important to avoid relying solely on technology.

The use of ChatGPT tool in creating assignments, essays, papers, and scientific papers is beneficial for students. It makes it easier for them to complete their assignments. The technology behind ChatGPT tool is impressive, as it produces structured and coherent sentences with accurate information based on Setiawan & Luthfiyani (2023). Students can work on scientific papers or papers more quickly by using appropriate prompt techniques and according to the structure of writing scientific papers.

When used appropriately, ChatGPT can be a useful tool for interactive learning, for example, it can be used to test students’ understanding of material by providing answers to questions. However, it is important to note that using ChatGPT can lead to plagiarism or copying other people’s written work. To avoid such violations, researchers have developed several strategies for writing essay assignments or scientific papers. To create essays or term papers, first create a list of activities that show the progress of the work. Second, submit assignments via Google Drive using Google Document software to track progress. Third, use specific writing techniques that follow standard rules and regulations for writing academic papers. Fourth, ask students to explain, discuss, and critique their writing.

To ensure that educational regulations are adhered to, ChatGPT needs to be accompanied by ethical and moral guidelines when used in academia. To ensure compliance with educational regulations, the use of ChatGPT in academia must be accompanied by ethical and moral guidelines. Educators should establish guidelines for the use of ChatGPT to prevent plagiarism and other violations of academic integrity. It is expected that students will refrain from committing immoral and unethical violations in education. It is important to build moral understanding for both students and educators so that they are aware of the limitations of using ChatGPT in an educational context, as noted by Faiz & Kurniaiwaty (2023).

4. CONCLUSION

ChatGPT is an AI system that enables text-based conversation interactions. It has various functions, including language translation, recommendations, productivity enhancement, and education assistance. Using ChatGPT in education provides benefits such as personalized learning, accessibility, interactive learning resources, and assignment help. However, using ChatGPT also has drawbacks, such as limited understanding, inability to replace creative workers, incorrect answers, inability to differentiate between facts and opinions, and reliance on a stable internet connection. While ChatGPT can be useful for instant data searching, summarization, and other research activities, it may also diminish the value of manual research processes. Continued research and development are crucial to maximizing the benefits of using ChatGPT while addressing existing challenges. Additionally, the use of ChatGPT in research may pose issues regarding data validity and reliability due to its reliance on internet-available information, which may not always be accurate, verified, or up-to-date. Additionally, it is important to note that relying solely on ChatGPT can negatively impact the quality of research that depends on the accuracy and reliability of data. The use of ChatGPT in research cannot replace the role and contribution of researchers. Quality research involves critical thinking processes, appropriate methodological design, rigorous data collection, and in-depth analysis. ChatGPT does not have the ability to replace the intelligence and experience of a human being in carrying out these processes. The utilization of ChatGPT in research may result in the transmission of misused data.
addition to the aforementioned weaknesses, it is crucial to consider privacy and security issues when using ChatGPT in research, and it is therefore imperative to implement appropriate security measures and establish a strict privacy policy for the use of ChatGPT in research. Overall, the use of ChatGPT in research has the potential to streamline various aspects of research, including data retrieval, information summarization, and reference discovery. However, there are also weaknesses and challenges that need to be addressed, such as limitations in understanding the context, reliability of the data, reliance on Internet sources, and the changing role of the researcher. It is important to use ChatGPT as an aid in the research process and not as a substitute for a comprehensive and methodical research process that includes the contributions of knowledgeable and experienced human resources.

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Abstract & Introduction

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Introduction

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