Analyzing Social and Psychological Impacts : Shifting Student Interaction from Teachers to ChatGPT in the Learning Process

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Abstrak

Integrasi kecerdasan buatan (AI), khususnya ChatGPT, ke dalam Pendidikan dapat mengurangi keterlibatan sosial di antara siswa dan guru serta mengurangi keterampilan berpikir kritis karena siswa lebih memilih jawaban mudah daripada berpikir analitis yang mendalam. Studi ini bertujuan untuk menyelidiki dampak sosial dan psikologis dari pergeseran interaksi siswa dari guru ke AI. Metode penelitian yang digunakan adalah studi literatur dengan mengkaji beberapa lliteratur yang relevan dan terkini. Adapun hasil dari penelitan ini adalah terhambatnya perkembangan keterampilan komunikasi dan kolaborasi yang esensial antara siswa dan guru sebagai dampak dari intensitas penggunaan AI. Selain itu, ketergantungan pada ChatGPT dapat menyebabkan pemahaman dangkal tentang subjek, dengan siswa menerima informasi secara langsung tanpa evaluasi menyeluruh sehingga mempengaruhi perkembangan akademis dan pemahaman mereka secara keseluruhan. Hasil selanjutnya dari studi ini ialah menekankan pentingnya mengembangkan kecerdasan emosional, yang tidak dapat efektif dibina oleh AI. Temuan ini menggarisbawahi peran tak tergantikan dari para pendidik dalam memelihara perkembangan kognitif dan sosial-emosional, serta mengadvokasi pendekatan yang seimbang dalam mengintegrasikan AI dalam pendidikan. Studi ini menyerukan implementasi strategis AI untuk memaksimalkan manfaatnya dan mengurangi potensi kerugiannya.
Kata Kunci: perubahan sosial, perubahan psikologis, ChatGPT

Abstract

The integration of artificial intelligence (AI), specifically ChatGPT, into education it may reduce social engagement among students and teachers also can diminish critical thinking skills, as students might prefer easy answers over deep, analytical thinking. This study investigates the social and psychological impacts of shifting student interactions from teachers to AI. The research method used is a literature study by reviewing seceral relevant and current literature. The result of this study is the reduction in face-to-face interaction can hinder the development of essential communication and collaborative skills between students and teachers as an impact of the intensity of AI use. Moreover, the dependency on AI could lead to a superficial understanding of subjects, with students accepting information at face value without thorough evaluation, thereby affecting their overall academic development and comprehension. Additionally, the study underscores the necessity of developing emotional intelligence, which AI cannot effectively nurture. The findings underscore the irreplaceable role of educators in nurturing cognitive and socio-emotional development, advocating for a balanced approach to integrating AI in education.
Keywords: Social impacts, psychological impacts, ChatGPT

INTODUCTION

Education stands as a fundamental pillar in shaping the character and intellectual development of students. The educational landscape has undergone a significant transformation parallel to the advancements in artificial intelligence (AI) technology. This evolution is reshaping the educational landscape, ushering in innovative approaches to teaching and learning. Generative Pre-trained Transformer (ChatGPT) stands out as a pivotal advancement in the realm of artificial intelligence, drawing considerable attention from various sectors (Kharis & Zili, 2024). Crafted by OpenAI, ChatGPT serves as a sophisticated natural language processing model explicitly designed to generate textual responses in reaction to prompts (Setiawan & Luthfiyani, 2023). In the context of learning, the implementation of ChatGPT revolves around posing specific inquiries related to particular subject. This approach not only enhances the collective knowledge base for educators but also provides students with a unique and interactive learning experience. The distinctive feature of ChatGPT lies in its ability to furish well-organized and easily understandable responses, making it a valuable asset for both educators and learners.The demonstrated proficiency of ChatGPT in delivering responses that are coherent and insightful contributes significantly to fostering a more effective and accessible interaction for users. This extends beyond traditional educational methods, opening avenues for dynamic and adaptive learning environments.

ChatGPT exhibits several advantages over conventional chatbots. Notably, ChatGPT possesses the capability to remember prior user interactions within a conversation, enabling it to respond to follow-up questions, reject inappropriate requests, and clarify inaccurate responses (Supriyadi, 2022). Furthermore, ChatGPT excels in swiftly and accurately providing information across diverse contexts, relying on the search terms employed by users. The potential impact of ChatGPT on the realm of education is considerable. Its personalized approach to learning enhances focus, with ChatGPT responding to user queries, thus creating a more tailored learning experience. Functioning as an adaptive learning tool, ChatGPT can adjust to the specific needs of individual students. Its ability to offer additional explanations on concepts, present detailed insights, and assist in task completion, quizzes, and exam preparation (Hadian & Rahmi, 2023). ChatGPT's uniques capabilities contribute to a more interactive and personalized learning environment, positioning it as a powerful tool with the potential to advance educational practices. Its adaptability, quick information delivery, and ability to enhance understanding make ChatGPT a promising asset in the educational landscape.

The integration of ChatGPT into the realm of education resembles a double-edged sword, offering both promising opportunities and formidable challenges (Kharis et al., 2024). While the technology holds the potential to enrich learning experiences, its misuse poses significant threats to the educational landscape, raising crucial concerns related to data privacy and plagiarism. These concerns have grown in prominence alongside the widespread adoption of ChatGPT in learning environments. Approximately two months following its launch, academics have noted a noteworthy trend-around one-fifth of students are employing ChatGPT to complete their learning assignments. The results of a survey underscore this phenomenon, indicating a substantial uptake, with nearly 89% of students in the United States relying on ChatGPT to fulfill various academic tasks. Specifically, 53% of students use it for paper writing, 48% for examinations, and 22% for the composition of scientific papers. This widespread utilization prompts serious considerations regarding its potential impact on academic integrity and the ethical use of ChatGPT within educational settings.

Several educational institutions have imposed restrictions on the use of ChatGPT in the learning process. Universities in New South Wales (NSW), Queensland, and Tasmania have taken preventive measures against the misuse of ChatGPT during eximinations, which could potentially undermine the integrity of exams and the authenticity of students; work (Putri & Khasanah, 2023). Some school authorities and educational institutions perceive that ChatGPT has had a negative impact on the development of students' problem-solving abilities and critical thinking skills. The debate regarding the use of ChatGPT is unavoidable within

academic circles. While ChatGPT has brought advancements in the field of education, it also presents challenges that, if not handled judiciously, may result in a setback for the education sector due to the misuse of ChatGPT.

The Fourth Industrial Revolution and technological advancements have engaged society, including students, in interaction, communication, and a paradigm shift. Educational transformation has ensued, altering the traditional role of students who, in the past, solely received information from teachers and students has also undergone a fundamental change, replacing classical dynamics with a new interaction model based on artificial intelligence. One crucial aspect requiring attention regarding the use of ChatGPT is the social and psychological transformation of students. The utilization of ChatGPT in learning brings about a significant shift in student interaction and communication. This can influence how students engage with one another, shaping new social patterns within the educational environment. Additionally, the transformation may alter students'perceptions, self-reliance, and adaptation to new technologies.

Research conducted by Kharis & Zili (2024) analyzed the use of ChatGPT as a learning support tool. Based on research results, the use of ChatGPT in education can provide opportunities for interactive, flexible learning experiences, and introduce students to technology, especially artificial intelligence. Other research conducted by Faiz & Kurniawaty (Faiz & Kurniawaty, 2023) examines the challenges of using ChatGPT in education from a moral point of view. The research resluts found that the role of educators needs to instill abilities moral knowing which is done through habituation and building an academic culture that is in accordance with the rules. Research conducted by Saputra & Hidayati (2023) examined postgraduate lecturers' perceptions of ChatGPT in improving the quality of learning. Different from previous studies, this research analyzes the application of ChatGPT focusing on the social and psychological changes that occur in students.

The transformation in social and psychological dynamics introduced by ChatGPT as an AI language model capable of responding to questions and providing information warrants careful analysis. The presence of ChatGPT needs to be approached with wisdom. This research aims to investigate how the shift from human interaction to interaction with ChatGPT influences social and psychological aspects in the context of learning. Through an analysis of the social and psychological effects of this transition, this study seeks to provide profound insights into the implications of using artificial intelligence technology in the educational context. With a better understanding of these impacts, educators can more effectively guide the development and implementation of technology in efforts to enhance the learning process, while ensuring the well-initially sole providers of information, are increasingly evolving into facilitators with adaptive and preventive qualities in response to the presence of ChatGPT.

METHOD

This research was conducted through a literature review focusing deeply on relevant literature regarding the social and psychological effects on transitioning student interactions in the learning process from teacher to ChatGPT. There are more 20 pieces of literature that have been reviewed with journal accreditation and published within the last five years. The methodology involved several steps. First, literature identification was conducted to identifying literature discussing the use of ChatGPT especially in education. Scholarly articles, books, and relevant publications were used to gain a comprehensive understanding of the social and psychological impacts of interacting with ChatGPT. Next, literature were selected and evaluated. Only the most relevant literature was chosen for further analysis. Evaluation criteria included research methodology, key findings, and interpretations within the selected literature. The data analysis process employed several techniques and procedures to ensure a thorough examination of the literature. These techniques and procedures are literature identification, selection and evaluation, data extraction, qualitative data analysis.

Literature identification began with a comprehensive search for scholarly articles, books, and relevant publications discussing the use of ChatGPT especially in education. The gathered literature was the carefully evaluated to select the most relevant pieces for further analysis. The evaluation criteria included the research methodology used in the studied, key findings, the crediability of the sources, and the relevance of the interpretations. Key information from the selected literature was extracted systematically and analysis by qualitative approach.

Third steps for this research is literature analysis and synthesis. This step involved analyzing findings from the selected literature to identify patterns and key insights related to the social and psychological effects. Information from various sources was synthesized to form a holistic understanding of the research topic. Finally, an article detailing the finding and literature synthesis systematically was written. The article also provided a clear summary of how existing literature sheds light on the impact of transitioning student interactions from teachers to ChatGPT.

RESULT AND DISCUSSION

The literature study in this research plays a role in assisting researchers in collecting initial information, determining the theoretical framework, choosing the appropriate methodology to compare findings, avoiding repetition, supporting arguments, and identifying research gaps. The infusion of artificial intelligence into education represents a paradigm shift, marked by diverse applications. For instance, predictive analytics tools (Kharis, Hertono, Irawan, et al., 2023; Kharis, Hertono, Wahyuningrum, et al., 2023; Kharis, Zili, et al., 2023) are being utilized for student graduation predictions, offering insights that can inform educational strategies and interventions. Additionally, Computer Aided Instructure (Halim & Prasetyo, 2018) presents an interactive and technologically enhanced learning environtment, fostering a dynamic engangement between students and course materials. Furthermore, virtual mentors (Singh & Mishra, 2021) play a pivotal role in providing personalized guidance and support to students, contributing to their holistic development. These AI-driven tools and platforms enable a more tailored educational experience, addressing individual learning needs and preferences. The integration of AI in education is not limited to predictive analytics and virtual mentoring; it also extends to automated grading systems, personalized learning paths, and intelligent tutoring systems. These innovations are revolutionizing traditional educational methods, making learning more efficient, engaging, and accessible. The multifaceted integration of AI in education reflects a dynamic shift toward more adaptive and technologically enriched educational practices.

The shift in interaction from students and teachers to interaction with ChatGPT affects several issues in social and psychological aspects. One of the primaries impacts is the social involvement of different students towards teachers or lecturers. The practicality offered by ChatGPT makes students complacent and requires minimal effort to learn and understand concepts in depth from experts. They were satisfied with the answers provided by ChatGPT without looking for other literature to strengthen their understanding. Naturally, this will affect students' critical reasoning abilities. There's a chance that students will become passive learners when they use ChatGPT more and more. They could have a propensity to take information at face value without scrutinizing or evaluating it. This may impair their capacity for critical thought, impartial information evaluation, and the creation of well-informed arguments. Moreover, interacting with ChatGPT can result in superficial understanding. Student might believe they have grasped a concept when, in reality, their understanding is shallow, as ChatGPT provides persuasive but cursory responses. This can negatively impact long-term academic performance, as success across various subjects requires deep and critical understanding.

However, the decline in critical thinking skills is primarily a result of improper use of ChatGPT. It is important to recognize that ChatGPT is intended as a supplementary tool in the educational process, nit the primary source of learning. If students use ChatGPT appropriately and responsibly, the opposite effect can

occur. This aligns with research conducted by Guo & Lee (Guo & Lee, 2023). The findings reveal a significant improvement in students' self-perception of their critical thinking competence, particularly in the areas of posing incisive and probing question, evaluating information, and drawing logical conclusion, and comprehending complex subject matter. The recommendation by students to employ ChatGPT as a tool for enhancing critical thinking among their peers further underscores its potential contribution to the development and enhancement of students' critical thinking skills. Additionally, research by Sadat Shanto and Ahmad (2024) supports this, showing that students using ChatGPT frameworks improved from basic recall to higher levels of rationalization, according to Lee's thinking levels model.

Using ChatGPT to interact regularly can impact a person's level of social engagement, especially if interaction with the model replaces human-to-human interaction. Students' dependence on ChatGPT explanations reduces social interaction with classmates and lecturers in discussing and solving problems. In the world of education, social interaction during the group learning process is very important to improve communication skills, cooperation, and solving problems together. When students are not actively engaged in social interactions, they risk losing out on essential elements such as self-confidence, emotional support, and the motivation to learn. Human to human interactions between students and teachers play a crucial role in building strong social and emotional relationships. Students miss out on chances to learn vital social skills like cooperation, empathy, and vocal communication when these interactions decrease. As highlighted by Annisa Azzahra, Natanael, and Toriqo Abimanyu (2023), the absence of social interaction due to reliance on ChatGPT can have detrimental effects in students' overall learning experience.

The implication of the intense use of ChatGPT is the potential for reducing human interaction in learning. Warm and empathetic human interaction has important role in developing social skills and deep interpersonal relationships (Subiyantoro et al., 2023). While ChatGPT offers the ability to personalize learning experiences, it should not serve as a replacement for the role of teachers and lecturers as learning facilitators. Instead, it should be viewed as an assistant, enriching the student's learning journey. Teachers and lecturers provide not only knowledge but also guidance, mentorship, and emotional support that are essential for holistic learning. They foster a supportive learning environment where students can engage in meaningful discussions, receive personalized feedback, and develop critical thinking skills. By maintaining the balance between utilizing ChatGPT as a supplementary tool and preserving the central role of human educators, educational institutions can ensure that students receive a well-rounded education that nurtures both cognitive and socio-emotional development. Collaboration between technology and human educators can enhance the learning experience, preparing students for success in an increasingly digital and interconnected world.

Involvement of social interaction in learning that is not optimal will impact on reducing emotional intelligence (Pisica et al., 2023). Emotional intelligence is a person's ability to accept, assess, manage, control the emotions of themselves and others around them. This assessment based on a valid reason. In the learning process that involves student and educator, the dynamic two-way communication hopefully can be developed. Indirectly, this communication can hone students' emotional intelligence. Meanwhile, when students rely solely on communication with ChatGPT, which may not be designed to consider the user's emotional side, this dynamic is disrupted. ChatGPT lacks the ability to provide empathetic responses or consider the emotional context of the conversation. As a result, students may miss out on valuable opportunities to develop their emotional intelligence through meaningful human interactions. It's important to recognize the limitations of AI technologies like ChatGPT in fostering emotional intelligence and to prioritize the integration of human interaction in the learning process. By maintaining a balance between technological assistance and human engagement, educators can ensure that students have the opportunity to develop both their cognitive abilities and their emotional intelligence, preparing them for success in both academic and personal aspects of life.

Indeed, the dominance of a purely humanistic approach in the learning process can overshadow the potential benefits AI chatbots like ChatGPT. While warm human interaction is invaluable, it's essential to

recognize the advantages that AI chatbots bring, such as ease access and the ability to provide fast and accurate responses. Therefore, balanced cooperation between technology developers and educational practitioners is needed to create an optimal and sustainable learning environment. Technology developers mut work closely with educators to ensure that AI tools are designed to complement and enhance traditional teaching methods rather that replace them. This collaboration can help create AI-driven educational tools that are pedagogically sound and aligned with educational goals. Educators, on the other hand, need to integrate these tools thoughtfully into their teaching strategies. They should encourage students to use AI as a supplementary resource while still emphasizing the importance of human interaction, critical thinking, and collaborative learning. By doing so, educators can create a more dynamic and engaging learning environment that leverages the strengths of both human and artificial intelligence.

Intensive use of ChatGPT or similar virtual assistants may create a dependency on technology, with the potential to reduce an individual's ability to overcome social challenges without technological assistance. This technology is considered very easy to use and more effective in answering questions in a short time. ChatGPT is even able to present answers in the form of tables and detailed descriptions. This convenience can become an obstacle to the user's intellectual development and critical thinking abilities if not used wisely (Fatin et al., 2024). Another limitation is the lack of updated information because ChatGPT is based on information before September 2021 (Sallam et al., 2023). Therefore, this AI will most likely find it difficult to provide real-time information. Currently, users are only able to connect to ChatGPT via text. This chatbot is not able to accommodate non-text interactions such as facial expressions, voice notes, visual images, body language, and so on.

Educators need to recognize the characteristics that may indicate students are relying on ChatGPT for their assignments, these characteristics include the use of varied vocabulary and sudden changes in writing style, which may suggest a lack of personal knowledge or perspective. Assignment completed with ChatGPT often exhibit perfect grammar and syntax, use overly complex words, and contain no errors. They may also include irrelevant information, unexpectedly advanced content, and responses that are lengthy but lack substantial depth. Identifying these traits can help educators better monitor and assess student work (Mai et al., 2024).

Positive interactions with ChatGPT can increase levels of satisfaction and psychological well-being, while negative or less satisfying experiences can have the opposite effect. In line with the results of research conducted by Subiyantoro, et al. (2023), 85% of total student respondents stated that ChatGPT provide valuable learning support. Using ChatGPT in daily communication can shape and influence a person's ability to communicate with other humans, both positively and negatively. Negative communication is characterized by decreased creativity in language. Users are more interested in interacting with ChatGPT because they don't need a good communication method (Fatin et al., 2024).

Experiences with ChatGPT can shape users' perceptions of artificial intelligence, influence their level of trust in the technology, and increase awareness of its possible limitations. The answers obtained from ChatGPT are not always precise and complex. This is influenced by the prompt ordered to ChatGPT. If the prompt entered is clear and significant enough, the answers obtained from ChatGPT will be more satisfying. On the other hand, if the results obtained are not yet relevant to the context being sought, adjustments or modifications need to be made to ensure the accuracy of the ChatGPT answers (Sirah Robitha Maula et al., 2023). This underscores the importance of effective communication with AI to maximize its potential and highlights the need for users to actively refine their interaction strategies to obtain the most relevant and precise information.

CONCLUSION

The greatness of technology from time to time will still not be able to replace the role of educators. Students as social humans are creatures who still need the help of other humans, namely teachers, to fulfill their great curiosity. An educator's affection for his students, moral education, and ethics will not be able to be replaced by software like ChatGPT. ChatGPT as an artificial intelligence is only a tool that facilitates the human learning process according to current developments. The shift from student-teacher interactions to engagement with ChatGPT has significant social and psychological impacts. Primarily, it reduces students' social involvement with teachers, making them complacent and less inclined to seek deeper understanding from human experts. This reliance on ChatGPT can hinder critical thinking and lead to passive learning, where students accept information without scrutiny, resulting in superficial understanding. Balancing the use of ChatGPT with human interaction is crucial for holistic learning and developing both cognitive and emotional intelligence. Educators must recognize the traits of ChatGPT-reliant assignments to better assess student work and maintain the essential role of human teachers in fostering deep learning and social skills.

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