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CHATGPT: BETWEEN OPPORTUNITIES AND CHALLENGES IN INCREASING ACADEMIC PRODUCTIVITY

CHATGPT: ANTARA PELUANG DAN TANTANGAN DALAM MENINGKATKAN PRODUKTIVITAS AKADEMIK

Literature Studi
Studi Literatur

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ABSTRACT

Introduction: ChatGPT, one of Open AI's successful new innovations, has amazed people all over the world. ChatGPT helps scientific research in learning can be a beneficial educational innovation for students and higher education but also has promising potential and threats.

Purpose: This research will provide an overview of the opportunities and challenges of using ChatGPT for students.

Method: Literature Study, a qualitative approach.

Finding: The main challenges and ethical implications of ChatGPT in higher education :1. Academic Integrity 2. Gender and Diversity 3. Accessibility. Navigating the Digital Shift: Enhancing Digital Competency in Education. Human-AI collaboration and advanced technology pedagogy: an opportunity for ChatGPT.

Conclusion: ChatGPT can be used in higher education and training, to (i) assign individualized teaching resources and study plans based on each learner's needs and interests, (ii) guide learners through their education in a timely manner, (iii) produce learning materials that interesting things such as tests, interesting assignments, and interactive videos, (iv) supporting lecturers in evaluating student work and providing constructive criticism, and (v) organizing online discussions and collaboration between students and lecturers and librarians.

Keyword: *ChatGPT, Academic productivity, AI, Artificial Intelligence*

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ABSTRAK

Pendahuluan: CHATGPT, salah satu inovasi baru Open AI yang sukses, telah membuat kagum banyak orang di seluruh dunia. ChatGPT membantu penelitian ilmiah dalam pembelajaran dapat menjadi inovasi pendidikan yang bermanfaat bagi pelajar dan perguruan tinggi namun ChatGPT memiliki potensi dan ancaman.

Tujuan Penelitian: memberikan gambaran mengenai peluang dan tantangan penggunaan chat GPT bagi pelajar/mahasiswa.

Metode Penelitian: Studi Literatur, pendekatan kualitatif.

Hasil Penelitian: Tantangan utama dan implikasi etis ChatGPT di pendidikan tinggi :1. Integritas Akademik 2. Gender dan Keberagaman 3. Aksesibilitas. Menavigasi Pergeseran Digital: Meningkatkan Kompetensi Digital dalam Pendidikan Kolaborasi. Manusia-AI dan pedagogi teknologi canggih: peluang untuk ChatGPT.

Kesimpulan: ChatGPT dapat digunakan dalam pendidikan tinggi dan pelatihan, untuk (i) menetapkan sumber daya pengajaran dan rencana studi individual berdasarkan kebutuhan dan minat masing-masing peserta didik, (ii) membimbing peserta didik melalui pendidikan secara tepat waktu, (iii) menghasilkan materi pembelajaran yang menarik hal-hal seperti tes, tugas menarik, dan video interaktif, (iv) mendukung dosen dalam menilai hasil karya mahasiswa dan memberikan kritik yang membangun, dan (v) menyelenggarakan diskusi online dan kolaborasi antara mahasiswa dengan dosen dan pustakawan.

Kata Kunci: *ChatGPT, Produktivitas Akademik, AI, Kecerdasan Buatan*

INTRODUCTION

Appearing in June 2020 Chat GPT has made a breakthrough, especially in the education. Many people are impressed with ChatGPT because they look well structured, have a coherent relationship between words or sentences, are quite accurate, and have the ability to remember previous conversations. Compared to conventional methods, a scientific article or even a book can be created in a much shorter time if the right prompt technique is used. The world of education responded when it saw ChatGPT's ability to create organized writing.

ChatGPT is also used by students. Students use this application as an alternative to complete assignments. Students who use this ChatGPT to complete their final assignments. ChatGPT helps scientific research in learning. ChatGPT can be a beneficial educational innovation for students and higher education. ChatGPT has promising potential and threats. ChatGPT has the ability to collect, analyze and interpret unprecedented amounts of personal data, there are concerns about data privacy and security. Therefore, it is important to create data protection and privacy policies to prevent misuse or unwanted privacy violations. This creates problems in the world of education because educators believe that ChatGPT is an AI that threatens and damages the academic competence of students in schools and higher education. This causes problems. The use of ChatGPT does not support the development of students' problem solving and critical thinking skills, both of which are the key to academic and lifelong success (Rosenzweig-Ziff, 2023)

This research will provide an overview of the opportunities and challenges of using ChatGPT for students. The results of this research aim to provide information for students, lecturers and practitioners in the field of education regarding the opportunities and challenges of ChatGPT. Several previous studies have discussed the opportunities as well as challenges of the first ChatGPT. Artificial Intelligence's Capabilities, Limitations, and Impact on Accounting Education: Investigating ChatGPT's Performance on Educational Accounting Cases by Inger et al., (2023) explains that there are challenges and opportunities in the use of AI or Artificial Intelligence using ChatGPT. This research provides a basis for understanding and comprehending the impact of ChatGPT on the student teaching process. Second is the research "Role of activity-based learning and ChatGPT on students' performance in education" by Tamara Al Shloul. This research compares the learning process supported by ChatGPT with conventional learning patterns. The research results show that the use of ChatGPT in education shows its potential to enhance educational experiences through interactive conversations and innovative teaching methodologies, although there are considerations regarding potential limitations and ethical implications.

LITERATURE REVIEW | |

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NO	Title of Article	Finding
1	ChatGPT in education: Methods, potentials, and limitations (Memarian & Doleck, 2023)	Exploring ChatGPT in education through commentary and a non-empirical lens. [1] Identifying the potential and challenges of ChatGPT in an educational context. [1] Reviewed 63 studies on ChatGPT in the educational literature.
2	Unlocking the opportunities through ChatGPT Tool towards ameliorating the education system (Javaid et al., 2023)	ChatGPT enhances education through personalized learning and language translation. [1] It automates scoring, provides vocabulary lists, and summarizes documents. [2] ChatGPT customizes marketing, offers language resources, and simplifies communication
3	ChatGPT: Vision and challenges (Gill & Kaur, 2023)	ChatGPT enhances data analysis and interpretation in scientific research. ChatGPT supports legal professionals in drafting legal documents efficiently.
4	Exploring the impact of ChatGPT on education: A web mining and machine learning approach (Rejeb et al., 2024)	ChatGPT enhances writing skills and fosters interactive learning environments. Challenges include plagiarism and cheating due to AI tool integration. Ethical concerns highlight responsible AI usage and data privacy policies

Focus of the Articles:

The articles primarily discuss the challenges of enforcing editorial guidelines on AI-generated papers due to the difficulty in distinguishing them from human-written papers. They emphasize the importance of specifying the percentage of NLP-generated content in academic papers and considering excessive usage as academic misconduct to ensure academic integrity. The research explores the responsible use of AI tools like ChatGPT in education, aiming to maintain fairness, uphold academic integrity, and address ethical considerations

Methods Used:

The reviewed studies employ various methods such as commentary, literature review with comments, new models with ChatGPT, qualitative Q&A with ChatGPT, and studies involving students and teachers

Novelty:

The novelty lies in utilizing ChatGPT for innovative write-up and material production, including generating novel concepts, aiding authors in overcoming writer's block, producing automatic data for various platforms, and enhancing text quality. Another aspect of novelty is the need to adapt and fine-tune AI language models like ChatGPT for specific domains to maximize their effectiveness

METHOD

Researchers used a research method, namely literature study. Researchers rely on various literature to obtain research data and use a qualitative approach. Qualitative research places more emphasis on interpretation and in-depth understanding of the research subject. This article will discuss qualitative research methods, including characteristics, data collection techniques, data analysis, and validity and reliability in qualitative research. The approach used in this research is content analysis, content which is used to examine the contents of documents, scientific journals and data and is supported by interviews. The strategy used in research is phenomenology, because the research is related to social phenomena. This research uses qualitative research methods, understanding phenomena in their natural context (not in the laboratory) where researchers cannot manipulate a phenomenon being observed that occurs naturally and tries to explore the meaning of different truths by different subjects, method Qualitative is considered very

suitable because it is able to answer the research objectives, namely knowing the opportunities and challenges of using AI among students (Creswell, 2010). The data in this research is data in the form of secondary data obtained from printed and electronic documents, journals sourced from online resources related to the implementation of AI, AI in the field of education, AI opportunities and sources related to usage challenges. The analysis method used is Content Analysis (review). Side analysis is a research technique for making replicable inferences and validating the data by paying attention to the context (Miles et al., 2018)

RESULT AND DISCUSSION

Challenges of ChatGPT In The Scope of Higher Education

Chat GPT's impact on higher education has been rapid and massive, even though its application in higher education is very broad, many universities have banned it for fear of student plagiarism. This section describes the main challenges and ethical implications of ChatGPT in higher education.

Academic Integrity

The main concerns expressed about ChatGPT in higher education relate to academic integrity. Higher education and educators have warned about the increased risk of plagiarism and cheating when using ChatGPT to write essays and exams. This may have deeper implications for subjects who rely more on written input or information retrieval, which is an area that ChatGPT could better support. There are also concerns that existing tools for detecting plagiarists may not be effective in the writing done by ChatGPT. This has prompted the development of other applications that can detect whether AI has been used in writing. Meanwhile, several higher education institutions around the world have banned Chat GPT due to concerns around academic integrity and higher education and are updating or changing the way they conduct assessments, and basing them on in-class or unwritten assignments. Lack of regulation ChatGPT is currently unregulated, an issue addressed in UNESCO's Recommendations on AI Ethics (see next section). Cognitive bias It is important to note that ChatGPT is not governed by ethical principles and cannot differentiate between right and wrong, right and wrong. This tool only collects information from databases and texts that it processes on the internet, so it also studies any cognitive biases found in that information, therefore, it is important to critically analyze the results obtained and compare them with other sources of information.

Gender and Diversity

Concerns about gender and other forms of discrimination do not only occur with ChatGPT, but also occur in all forms of AI. On the one hand, this reflects the lack of participation of women in AI-related subjects and in AI research/development and so on. on the other hand, the power of generative AI to produce and disseminate content that discriminates against or reinforces gender and other stereotypes.

Accessibility

There are two main concerns surrounding ChatGPT accessibility. The first is the lack of availability of tools in some countries due to government regulations, censorship, or other restrictions on the internet. The second concern relates to broader issues of access and equality in terms of the unequal distribution of internet availability, costs and speeds. In this regard, AI teaching and research/development is also not evenly distributed throughout the world, and some regions have a much smaller chance of being able to develop knowledge or resources on this topic. The commercialization of ChatGPT was made by a private company, Open AI, although the company has promised to maintain a free version of ChatGPT, the company has launched a subscription option that offers better reliability and faster access to new versions of the tool. The involvement of private institutions in higher education is not new and requires caution and regulation if the selection of AI and other tools run by companies that depend on making profits, may not be open source (and therefore more equitable and available), and who may extract data for commercial purposes.

Navigating the Digital Shift: Enhancing Digital Competency in Education

The digital revolution is shaping academics to improve their digital competencies to meet the new demands of the information age. The emergence of advanced technologies, such as artificial intelligence and

extensive data analysis, has set new benchmarks in digital literacy among higher education. Digital competency now goes beyond the basic understanding and operation of technology, it includes a strategic understanding of digital pedagogy, the creation of innovative content, and the development of digital communication and collaboration. Higher education, as navigators of this digital era, must increase their digital fluency to be skilled at navigating the course of contemporary education. According to (Keiper et al., 2023) this increase in digital literacy involves a commitment to continuous professional development, which includes engaging with the latest digital education theory, participating in special training, and mastering the application of AI tools such as ChatGPT in the classroom.

The role of educators in this new era is multifaceted: they are curators of digital content, facilitators of technology-based pedagogy, and mentors in virtual collaborative spaces. To fulfill this role effectively, educators must actively integrate digital methodologies into their teaching practices, thereby optimizing the use of information technology to enrich the learning experience (Sailer et al., 2024).

By embracing this digital shift, educators not only enhance their teaching abilities but also empower students to thrive in a technologically advanced society. The journey towards digital mastery is ongoing, requiring educators to stay abreast of technological advances and pedagogical innovations, ensuring that they remain at the forefront of educational transformation.

Improving digital competence in education through interaction with ChatGPT can be an interesting and useful step. Here are some ways to do it:

Questions and Discussion: students can interact with ChatGPT to ask questions about technology concepts, software, or even about the latest developments in the digital world. This kind of discussion can help deepen their understanding of the topic

Simulation and Practice: ChatGPT can be used to simulate real-world situations involving the use of technology. Students can be invited to solve problems or face challenges that are relevant to their digital competencies.

Creative Skills Development: Students can collaborate with ChatGPT to create digital content such as short stories, film scenarios, or graphic designs. This not only helps them hone their creative skills, but also broadens their understanding of various technological applications.

Adaptive Learning: ChatGPT can be adapted to individual students' level of understanding and interest. By leveraging artificial intelligence, ChatGPT can customize learning materials according to each student's needs and preferences.

Problem Solving: Students can use ChatGPT as a source of information and assistance in solving technology problems they encounter. This could include step-by-step guides or tips for resolving specific issues.

Text-Based Skills Training: Interaction with ChatGPT can help students improve their writing skills and communicate effectively through text. They can practice writing clear and organized emails, reports, or messages.

Introduction to AI and Chatbots: Through interaction with ChatGPT, students can understand the basic concepts of artificial intelligence (AI) and how chatbot technology works. This gives them a better understanding of technological developments in the digital era.

Human-AI Collaboration And Advanced Technology Pedagogy: An Opportunity for ChatGPT

At the forefront of educational evolution, educators now play an important role in fostering a symbiotic relationship between human intelligence and computational intelligence. The integration of AI, particularly through tools like ChatGPT, into the classroom has catalyzed a new educational paradigm, fostering complex interactive dynamics that require higher education to harness and guide the pedagogical potential of human-computer dialogue. Proficiency in AI-powered education strategies has become a cornerstone for educators, signaling a shift from fear of technological replacement to a partnership model.

Higher education, as the conductor of this digital symphony, must be clever in balancing the use of AI tools such as ChatGPT to enhance the Education narrative (Mei et al., 2023). This requires strategically applying AI to support personalized teaching methodologies, creating an ecosystem where human creativity and machine efficiency inspire each other, as evidenced by the use of ChatGPT in higher education 2 for personalized learning and skills development. Educators must be adept at utilizing this technology to not only complement but also enhance their teaching skills. This involves a deliberate approach to integrating AI that amplifies the power of higher education and technology, creating an environment where dynamic interactions between humans and machines produce richer educational experiences.

The goal is to create classrooms where AI serves as a catalyst for innovation, encouraging students and higher education to explore new frontiers of learning. In this context, educators have an important role in managing AI resources and guiding its ethical application in teaching. The dialogue between educators and AI must be managed carefully to ensure that the technology is used to enhance, not undermine, educational outcomes. By doing this, higher education can create learning spaces that are not only technologically advanced but also pedagogically sound, where human-AI synergy drives deeper and more engaging learning processes.

CONCLUSION

Higher education institutions can increase the use of ChatGPT, increasing the likelihood of its acceptance by users and their participation in learning activities. Through Chat GPT can embrace this digital shift, educators not only improve their teaching abilities but also empower students to thrive in a technologically advanced society. AI serves as a catalyst for innovation, encouraging students and higher education to explore new frontiers of learning. Human-AI synergy drives a deeper and more engaging learning process. ChatGPT can be used in higher education and training, to (i) assign individualized teaching resources and study plans based on each learner's needs and interests, (ii) guide learners through their education in a timely manner, (iii) produce learning materials that interesting things such as tests, interesting assignments, and interactive videos, (iv) supporting lecturers in evaluating student work and providing constructive criticism, and (v) organizing online discussions and collaboration between students and lecturers and librarians. ChatGPT can be used to provide students with individualized education plans by analyzing information about students' preferences, abilities, and areas of improvement in class. ChatGPT can help students succeed in higher education by providing individualized advice on learning resources and activities. For example, a lecturer can utilize ChatGPT to get advice on how to improve learning, teaching methods, and administration of the learning environment. ChatGPT provides personalized advice to lecturers, librarians based on data analysis of educational best practices and student learning outcomes. If students speak a foreign language, they can take advantage of ChatGPT to get specific suggestions on how to improve words, phrases, and pronunciation

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