

ChatGPT as Academic Support Tool: Students' Perceptions & Practices.

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ABSTRACT

The use of ChatGPT, a generative artificial intelligence (GenAI) tool, is becoming prevalent among students in higher education. ChatGPT's chatbot function tends to be utilised as an academic support tool among students. This phenomenon is causing increasing concern among academics and students because it can have implications for academic integrity and the quality of higher education. This narrative literature review employs the PRISMA method to achieve its aims which are to explore students' perceptions and academic practices of ChatGPT for academic purposes. The two main themes explored in the literature were: 1. Student's perceptions of ChatGPT (positive and negative), and 2. Ethical considerations when utilising Artificial Intelligence (AI) chatbot technology for academic purposes. The overall findings suggest that students perceive ChatGPT positively and intend to use it in their academic work regardless of their disciplinary backgrounds. Despite its advantages, students raised concerns regarding the ethics of using ChatGPT for academic purposes. The findings from this review suggest that educational institutions should provide guidance and policies regarding the incorporation of AI chatbot technology, such as ChatGPT, into their pedagogy because it could offer opportunities to help students learn and empower them to take autonomy in their own learning. However, ChatGPT is not recommended as a substitute tutor.

Keywords: GenAI, AI chatbot technology, higher education, student's perceptions

INTRODUCTION

With the emergence of generative artificial intelligence (GenAI), there is an increasing interest in the potential of artificial intelligence (AI) chatbot technology, such as ChatGPT, to support student learning and improve academic achievement. ChatGPT is "an intelligent chatting robot that is able to provide a detailed response according to an instruction in a prompt" (Wu et al., 2023, p1122). It is gaining popularity among students because it engages them actively in dialogues by responding to their prompts. Users can request the chatbot to complete various tasks, such as searching for information, suggesting essay structures, summarising and paraphrasing texts and analysing statistical data. ChatGPT's responses appear to mirror human language, and this has gained it more than one million users in a very short time, and it is predicted that ChatGPT and other AI learning tools will continue to develop (Lee, 2023). Hence, a range of studies has been conducted to understand students' motivation to use this tool. These studies involved investigations into students' experiences and perspectives, including ChatGPT's role as an academic support tool or a virtual tutor in various educational settings. Some students perceived ChatGPT as useful in its ability to generate diverse forms of text (Xiao & Zhi, 2023; Bonsu & Baffour-Koduah, 2023; Ngo, 2023) and answer queries instantaneously (Ngo, 2023; Tu & Hwang, 2023). This has positioned ChatGPT as a powerful academic support tool in this technologically advanced era (Xiao & Zhi, 2023). Thus, the purpose of this review is to investigate students' perceptions and academic practices when using ChatGPT as an academic tool or a virtual tutor. The exploration of students' perceptions, whether positive or negative, and their ethical considerations in their use of this GenAI tool to assist them with their academic work can be vital, as their lived experiences can contribute to the enhancement of educational research and practice as

highlighted by Farrell (2020). The findings of this study could be of importance to stakeholders in higher education, including students, academics, universities, and policymakers to ensure the responsible and effective use of ChatGPT or similar GenAI tools.

Research stance

In conducting this study, the researcher's beliefs aligned with both ontological and epistemological research paradigms. The researcher adopts a pragmatist approach because it covers the how and why aspects of research (Morgan, 2014) and the focus of this research is on the application of knowledge and solutions to problems. The application of knowledge in this research context refers to the texts generated by ChatGPT to solve problems such as suggesting essay structure and paraphrasing, suggesting relevant literature to support research, and writing summaries. From an ontological perspective, the researcher views reality as dynamic, and is shaped by practices and actions. From this perspective, it is believed that students' experiences with ChatGPT represent multiple realities based on their academic practices, which are constantly negotiated, debated, and interpreted. In terms of epistemology, the researcher believes that knowledge is obtained through the actions and experiences of students in their interactions with ChatGPT and the outcomes of these experiences. In the context of ChatGPT use by students, the researcher believes that students examine knowledge using tools such as ChatGPT to provide solutions and answers to their questions or prompts, especially when it concerns their academic work. To a certain extent, students understood ChatGPT's role as an academic support tool, and through their interaction with the AI chatbot, they formed their own understanding and interpretation of the knowledge gained.

METHODOLOGY

This narrative literature review employs the PRISMA method due to its highly organised and systematic nature. This approach ensures a clear and transparent reporting process, which facilitates an easy assessment of the credibility of the review. The purpose of this review is to investigate students' perceptions and academic practices when using ChatGPT. The following research questions helped to focus the investigation.

RQ1: How do students perceive the usefulness of ChatGPT in academic contexts?

RQ2: What ethical considerations do students have when using ChatGPT?

This review applied the PRISMA 2020 checklist (PRISMA, 2024) to guide the following stages of research:

Database search and identification of relevant articles.

Selection and screening of relevant articles.

Coding and analysis of selected articles.

Database search and identification of relevant articles

The main databases searched were Scopus (<https://www.scopus.com/>) and Lancaster University OneSearch (https://onsearch.lancaster-university.uk/primo-explore/search?vid=LUL_VU1). The main keywords for the search were “student perceptions, student expectations, ChatGPT, higher education, English, ethical considerations, 2022-2024”.

The search of these databases yielded the following results:

Figure 1 shows the scope of the keywords applied during Advanced Search in the Scopus database. The search yielded 88 documents

Enter query string

TITLE-ABS-KEY (ChatGPT) AND (student perceptions OR beliefs OR expectations) AND (academic support tool) AND (academic practices) AND PUBYEAR > 2022 AND PUBYEAR < 2025 AND (LIMIT-TO (EXACTKEYWORD,"ChatGPT") OR LIMIT-TO (EXACTKEYWORD,"Artificial Intelligence") OR LIMIT-TO (EXACTKEYWORD,"Students") OR LIMIT-TO (EXACTKEYWORD,"Higher Education") OR LIMIT-TO (EXACTKEYWORD,"Generative AI") OR LIMIT-TO (EXACTKEYWORD,"OpenAI") OR LIMIT-TO (EXACTKEYWORD,"GPT-4") OR LIMIT-TO (EXACTKEYWORD,"GPT-3") OR LIMIT-TO (EXACTKEYWORD,"Ethical Technology") OR LIMIT-TO (EXACTKEYWORD,"University Students") OR LIMIT-TO (EXACTKEYWORD,"GPT-3.5") OR LIMIT-TO (EXACTKEYWORD,"ChatGpt") OR LIMIT-TO (EXACTKEYWORD,"AI In Education")) AND (LIMIT-TO (SUBJAREA,"SOCI")) AND (LIMIT-TO (DOCTYPE,"ar")) AND (LIMIT-TO (LANGUAGE,"English"))

Outline query

Add Author name / Affiliation

Clear form

Search Q

Figure 1: The Advanced search criteria for Scopus database.

When the initial search was conducted in Lancaster OneSearch using Advanced Search, the platform did not yield any results because the keywords were too specific. Hence, the search terms were adjusted to 'ChatGPT in education AND students' perceptions in the Basic Search mode, which yielded 70 results. In total, the search on the two platforms yielded 158 results.

Selection and screening of articles

Before the screening and selection process was conducted, 13 duplicate articles were removed, and one article was removed because it was not in English despite the language filter being applied. This resulted in 144 articles to be screened. This stage of research is important for discerning the relevance of research studies to the topic being investigated. The first point of evaluation was the title. Articles with titles irrelevant to the topic were excluded. The second point of evaluation was the abstracts, which were reviewed in detail to assess their relevance to the two research questions. A total of 129 articles were excluded because they were not directly relevant to the topic. This left only 15 articles to be screened. After the rescreening process, which involved skimming and scanning of the article content, 11 articles were included in the final analysis. These articles were selected based on the inclusion and exclusion criteria listed in Table 1.

Inclusion criteria	Exclusion criteria
Student perceptions OR beliefs	Articles written and published in other languages
Higher education	Published before 2022
ChatGPT	ChatGPT not in higher education
2022-2024	ChatGPT in other disciplines
English	
Social Science	

Table 1: Final inclusion and exclusion criteria of screened and selected articles.

The identification and screening process for the final articles is demonstrated in the following flow chart, which was adapted from the original PRISMA flow chart for the purpose of this exploration.

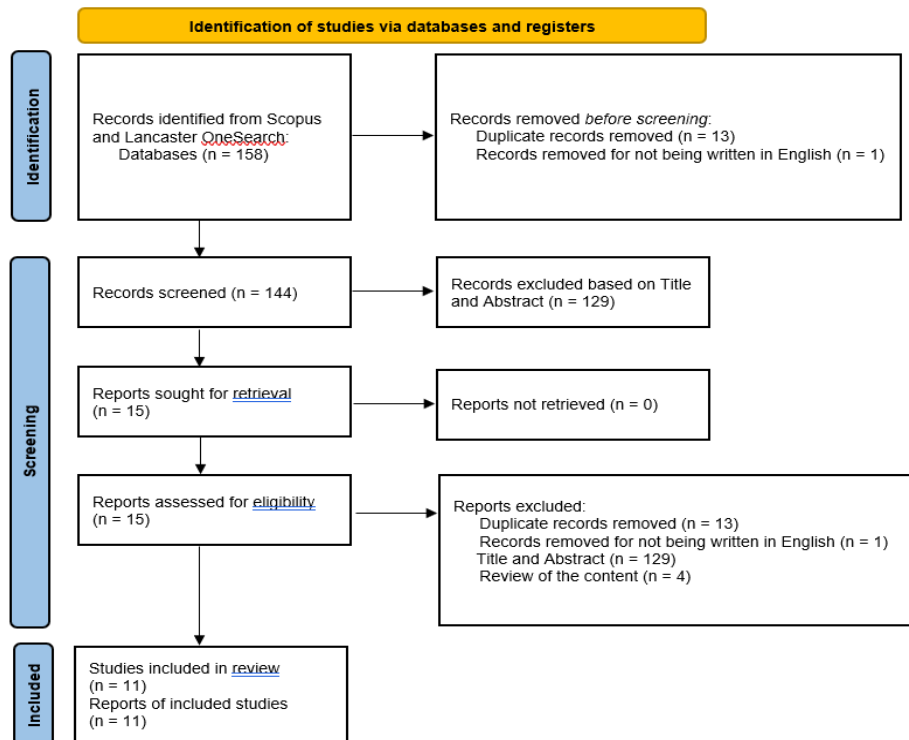


Figure 2: PRISMA flow chart adapted from Page et al. (2021).

Coding and analysis of selected articles

The information in the selected articles was categorised into two themes: perceptions and ethical considerations. The initial data extraction and coding of the information were performed using the matrix shown in Table 2. This table is adapted from Example 7.6 in Jesson, et al. (2011, p. 118-120). The extracted information was coded according to perceptions – positive, negative, ethical considerations or concerns and recommendations. The purpose of these categories is to highlight the different perceptions and ethical considerations when students use ChatGPT.

Source	Perceptions	Ethical considerations or concerns
Xiao & Zhi (2023)	Positive	ChatGPT risks: potential plagiarism, misuse as a shortcut by unmotivated students.
	Peer Tutor: Provides individualised assistance to students.	Solution: proper teacher guidance is crucial.
	Creativity: Helps in generating new ideas and perspectives.	Future teachers: embrace ChatGPT as a resource, not a threat.
		Action: integrate ChatGPT into pedagogy for effective, responsible use.
		Techniques: revise prompts to enhance learning outcomes.
		Skill: teach students to critically evaluate ChatGPT-generated content.

Țală et al (2024)	<p>Positive</p> <p>Efficiency: Saves time and effort in content creation and learning processes.</p> <p>Inspiration: Sparks creative ideas and fosters innovation in academic contexts.</p> <p>Information: Enables searches for data not readily available via Google.</p> <p>Perception: AI-generated content is viewed relatively positively, being rarely incorrect or irrelevant.</p>	<p>Approach: exercise caution in using AI for academic writing.</p> <p>Ethical concern: using AI-generated text in academic assignments may be considered unethical.</p> <p>Trust: students often place high trust in AI as a reliable content source.</p>
	<p>Negative</p> <p>Perception: Students often view information as reliable.</p> <p>Risk: High potential for misinformation and resulting mistrust if content is not critically evaluated.</p>	
	<p>Recommendations</p> <p>Careful evaluation and responsible use of AI in academic contexts.</p>	
Sila et al. (2023)	<p>Positive</p> <p>Knowledge: Enhances comprehension and understanding.</p> <p>Efficiency: Saves time and simplifies completion of assignments.</p> <p>Accessibility: Highly available anytime, anywhere.</p> <p>Critical Thinking: Encourages students to think critically and ask insightful questions.</p> <p>Information: Provides immediate access to vast, diverse knowledge across domains.</p>	

	<p>Negative</p> <p>Trustworthiness: Students are unsure about the accuracy and reliability of the information provided.</p> <p>Feedback: Lacks personalised feedback on individual work or assignments.</p> <p>Impact: May not effectively enhance academic performance.</p>	
Adams et al. (2023)	<p>Positive</p> <p>Learning Enhancement: Potential to improve learning outcomes and create individualised educational experiences.</p> <p>Clarity: Provides clear and accurate explanations, simplifying complex concepts.</p> <p>Efficiency: Facilitates tasks and assignment completions effectively.</p> <p>Resourcefulness: Aids in locating relevant learning materials.</p> <p>Stress Reduction: Helps reduce stress and supports understanding of challenging concepts.</p>	<p>Integration: Incorporating and accrediting ChatGPT-generated content in academic tasks/assignments is unpopular due to concerns over ethical standards and academic integrity.</p> <p>Privacy: Emphasises caution in sharing sensitive information due to data privacy and security concerns.</p> <p>Balance: Highlights the need to balance AI assistance with personal critical thinking, problem-solving, and creativity in the learning process.</p>
Bonsu & Baffour-Koduah (2023)	<p>Positive</p> <p>Accuracy: Provides precise responses to queries.</p> <p>Convenience: Offers ease and comfort in use.</p> <p>Academic Support: Assists students in academic-related activities effectively.</p> <p>Simplicity: Delivers straightforward and precise solutions.</p> <p>Creativity: Generates ideas for research projects.</p> <p>Impact: Impresses lecturers with well-formed outputs.</p>	

	<p>Negative</p> <p>Laziness: Encourages student dependency, reducing effort.</p> <p>Evaluation Challenge: Hinders teachers' ability to assess and evaluate students' true performance.</p> <p>Currency: Raises concerns about the up-to-date relevance of information.</p> <p>Motivation: Demotivates students from actively engaging in learning.</p> <p>Emotional Impact: Evokes fear and discomfort in some users.</p>	
	<p>Recommendations</p> <p>Implementation as a student portal.</p>	
Albayati (2024)	<p>Positive</p> <p>Easy to use</p>	<p>Ease of Use: Privacy concerns do not significantly influence students' perception of the system's ease of interaction.</p> <p>Impact: Privacy concerns may affect perceived usefulness, social influence, and level of trust in the system.</p>
	<p>Negative</p> <p>Privacy: Issues related to handling personal information.</p> <p>Trust: Challenges in ensuring reliability and credibility.</p> <p>Security: Risks associated with safeguarding data and information.</p>	
Chan & Hu (2023)	<p>Positive</p> <p>User-Friendly: Easy to use and accessible 24/7.</p> <p>Support: Offers anonymous assistance across various areas.</p> <p>Personalisation: Provides tailored and immediate learning experiences.</p> <p>Creative Aid: Assists with writing, brainstorming, research, and analysis.</p>	<p>University Education: Potential impact on the perceived value of university education.</p> <p>Privacy & Ethics: Concerns over the collection of personal information from messages and challenges in detecting plagiarised content.</p> <p>Risks: Governance-related risks associated with Generative AI,</p>

	<p>Media: Supports visual and audio multimedia learning.</p> <p>Administrative: Helps with organizational and administrative tasks.</p>	emphasising the need for effective policies.
	<p>Negative</p> <p>Over-Reliance: Excessive dependence on Generative AI can lead to challenges.</p> <p>Accuracy & Transparency: Issues with ensuring precise and transparent outputs.</p> <p>Holistic Competencies: Hinders long-term growth, skill development, and intellectual advancement.</p>	
	<p>Recommendations</p> <p>Integration: Incorporate Generative AI into learning practices.</p> <p>Usefulness: Recognised for providing unique insights and personalised feedback.</p> <p>Value: Highly appreciated in enhancing educational experiences.</p>	
<p>Chan & Lee (2023)</p>	<p>Positive</p> <p>Efficiency: Saves time and enhances productivity.</p> <p>Skill Development: Helps students become better writers.</p> <p>Support: Serves as a valuable tool for student support services.</p> <p>Anonymity: Ensures privacy for users, promoting comfort and confidence.</p>	<p>Compliance: Importance of adhering to current university regulations.</p> <p>Ethical Concerns: Unethical, dishonest, and irresponsible uses include cheating, plagiarism, and copyright violations.</p>

	<p>Negative</p> <p>Intelligence Limitation: AI compiles and repackages existing information without generating new knowledge.</p> <p>Reliability Concerns: Students may lack critical thinking and experience to assess the accuracy of AI-generated content.</p> <p>Laziness: Encourages students to be less thorough in completing tasks.</p> <p>Validation: Requires fact-checking and validation of outputs due to potential inaccuracies, biases, and unfairness.</p> <p>Social Impact: Reduces opportunities for students to interact and socialise with peers.</p> <p>Academic Use: Students may exploit AI to complete assignments quickly.</p> <p>Over-Reliance: Excessive dependence on AI poses risks to creativity and humanity.</p>	
<p>Selim (2024)</p>	<p>Positive</p> <p>Writing Improvement: Enhances the quality and clarity of writing.</p> <p>Efficiency: Saves time during the writing process.</p> <p>Clarity: Provides straightforward and precise explanations.</p> <p>Plagiarism Prevention: Helps avoid unintentional plagiarism.</p>	
	<p>Negative</p> <p>Reliance: Students use AI to meet assignment deadlines.</p> <p>Confidence: Limited impact on boosting confidence in producing high-quality written work.</p>	

	<p>Recommendations</p> <p>Integration: Incorporate AI writing tools into EFL university courses.</p> <p>Curriculum Enhancement: Potential to enrich the curriculum and improve learning outcomes.</p>	
<p>Ngo (2023)</p>	<p>Positive</p> <p>Multilingual Support: Functions as a search engine accommodating various input languages.</p> <p>Study Tool: Serves as a valuable resource for academic purposes.</p> <p>Quick Responses: Provides fast and efficient answers.</p> <p>Ease of Use: User-friendly interface enhances accessibility.</p> <p>Efficiency: Saves time and effort in information retrieval.</p> <p>Knowledge Variety: Offers a broad range of information across domains.</p> <p>Personalised Assistance: Provides individualised tutoring and feedback.</p> <p>Learning Enhancement: Improves learning and retention.</p> <p>Comprehension: Explains theories clearly and simplifies complex concepts.</p> <p>Creativity: Generates ideas and critiques writing effectively.</p> <p>Suggestions: Offers recommendations for improvements.</p> <p>Prompt Writing: Assists in crafting effective prompts for accurate and desired outputs.</p> <p>Negative</p>	

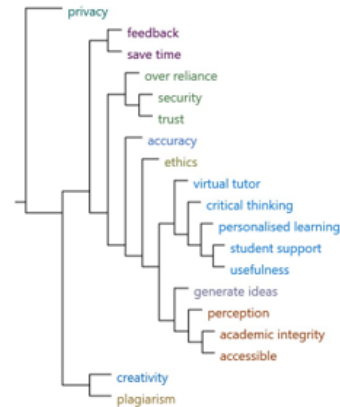
	<p>Critical Thinking: Students may become lazy thinkers, struggling to evaluate the quality and reliability of sources.</p> <p>Citation Issues: Difficulty in citing sources accurately, raising concerns about content validity.</p> <p>Language Skills: Challenges in replacing words effectively and using idioms appropriately.</p> <p>Output Quality: Produces weaker responses after several paragraphs.</p>	
<p>Tu & Hwang (2023)</p>	<p>Positive</p> <p>Flexible Learning: Acts as a facilitator of flexible learning.</p> <p>Effectiveness: Provides instant discussions, consultations, and personalised feedback.</p> <p>Virtual Tutor: Offers learning opportunities without location constraints.</p> <p>Support: Engages students in discussions, consultations, and answers their questions.</p> <p>Student-Centric: Positions students as the primary learners.</p> <p>Dual Role: Functions as both a tool for information retrieval and content generation, and as a tutor.</p> <p>Resourcefulness: Searches facts, answers questions, and provides learning materials.</p> <p>Learning Enhancement: Improves learning experiences by supporting activities like remembering, understanding, applying, and creating.</p> <p>Secondary Role: Teachers and robots play a complementary role in the learning process.</p>	

Table 2: Data extraction and coding of selected articles.

All articles that identified students' perceptions and ethical considerations when using ChatGPT were included in the final review. The second stage of the process was conducted using the NVivo software (<https://lumivero.com/>). This software produced results analogous to those presented in the matrix in Table 2. Therefore, the coding in NVivo confirms the coding in the matrix in Table 2. Figure 3 illustrates some of the word frequencies and codes generated in NVivo.



Summary of word cloud.



Items clustered by word similarity.

Image representations of coding in NVivo – Summary of word cloud and Items clustered by word similarity.

FINDINGS

The subsequent sections detail the two themes identified in the literature.

Students' perceptions of ChatGPT

The selection of articles provided an extensive range of students' perceptions of ChatGPT. These perceptions can be categorised into positive aspects and areas of concern.

One positive aspect is that students view ChatGPT as a useful tool for providing individualised educational experiences. These experiences according to Xiao and Zhi (2023), Ngo (2023), Chan and Hu (2023), and Tu and Hwang (2023), chatbots provide personalised feedback, individual tutoring, and flexible learning experiences. Another positive aspect is that it assists students in generating ideas during the brainstorming stage of assignment writing (Xiao & Zhi, 2023; Bonsu & Baffour-Koduah, 2023; Ngo, 2023; Tu and Hwang, 2023) and is a source of inspiration for new ideas (Țală et al., 2024). Although the students appreciated the chatbot's ability to generate ideas, they also applied their critical judgement in evaluating the trustworthiness and accuracy of the generated content. This point was emphasised by Xiao and Zhi (2023), Sila et al. (2023), and Adams et al. (2023) in which they suggested that ChatGPT encourages critical thinking and problem-solving skills among its users. Students also regarded ChatGPT as a tool to enhance their efficiency in completing their academic work, in particular, proving beneficial for improving their writing skills and it also saved time and effort in creating relevant contents (Țală et al., 2024; Sila et al., 2023; Selim, 2024), hence making them better writers as highlighted by Chan and Lee, (2023) and Selim, (2024). Sila et al. (2023), and Adams et al. (2023) in their investigations discovered that some students believed that the chatbot enhanced their knowledge and learning because they perceived it as contributing to their knowledge acquisition. ChatGPT is also recognised as an alternative to Google because it enables students to search for vast amounts of information, equivalent to search engines according to Țală et al. (2024) and Tu and Hwang (2023). Moreover, the information is accessible at any place and time (Sila et al., 2023). ChatGPT also aids students in academic tasks such as assignment completion and understanding of complex concepts, which could help in reducing stress when trying to meet deadlines, as emphasised by Adams et al. (2023). Overall, students found the chatbot easy to use (Albayati, 2024) as they appreciated its user-friendly interface (Chan and Hu, 2023), prompt responses (Ngo, 2023; Tu & Hwang, 2023), and interactive nature (Tu & Hwang, 2023).

However, there are also areas of concern noted by students who used ChatGPT in their academic work. According to Țală et al. (2024), students trusted the chatbot to provide accurate information and perceived it as a reliable source of information, which is a concern for academics because ChatGPT generated content may not always be accurate. Some students were also concerned about their overreliance on ChatGPT, which could

impact their intellectual development as it may suppress their critical thinking and creativity (Chan & Hu, 2023; Chan & Lee, 2023). Furthermore, Chan and Lee (2023) stated that some students observed that the chatbot lacked true intelligence because it seemed to collate and repackage information from various databases, and some students believed that they had become lazy thinkers (Ngo, 2023). Moreover, students' interactions with the chatbot may impede their interactions with their peers because they may mainly engage in discourse with the chatbot, as revealed by Chan and Lee (2023).

Ethical considerations when using ChatGPT

Despite the overall positive perception of ChatGPT, students expressed apprehension about unintentional plagiarism when relying on ChatGPT for assignment writing and coursework completion (Sila et al., 2023; Chan & Lee, 2023). Furthermore, according to Xiao and Zhi (2023), Țală et al. (2024) and Chan and Hu (2023), students were cautious about maintaining academic integrity while using ChatGPT, as they also recognised the importance of original work and avoiding unethical practices. This point was also reiterated by Chan and Lee (2023), who acknowledged the potential for cheating and copyright issues concerning the information generated by ChatGPT. Therefore, heavy reliance on ChatGPT may devalue students' university education experience. Adams et al. (2023), Albayati (2024), and Chan and Hu (2023) pointed out that students raised concerns about privacy and security, in which they were mindful about disclosing sensitive information to an AI system.

DISCUSSION

According to the literature, students have mixed opinions about ChatGPT. Some regarded it as a revolutionary academic support tool that could empower their learning, while others highlighted concerns about its accuracy and potential negative impacts on their learning experience. One of the main advantages of ChatGPT is that it acts as a virtual tutor to provide personalised learning experiences and support. It is also easily accessible at any time and place through an internet connection. Nevertheless, concerns about the reliability and accuracy of the content generated by ChatGPT have been raised, as well as the potential for overreliance on the tool, which could negatively impact students' academic skills and intellectual development. Additionally, concerns about privacy and security, as well as the possibility of unintended plagiarism, have been expressed. While ChatGPT offers valuable features, it is important for students to manage ethical concerns and use ChatGPT responsibly.

From these findings, it appears that students may continue to utilise the beneficial features of ChatGPT and its varied capabilities for academic purposes. Thus, there is a need for guidance and training regarding the appropriate and responsible use of the chatbot (Xiao & Zhi, 2023). Additionally, according to Xiao and Zhi (2023) and Chan and Lee (2023), academics should provide clear guidance on the effective use of ChatGPT to ensure that students are taught fundamental skills to critically evaluate the information generated by the chatbot. This process can encourage students to develop critical thinking skills and ascertain whether the content generated by ChatGPT is accurate and reliable. In other words, guidance and training can mitigate negative perceptions and ethical issues raised in the literature. Given that ChatGPT is one of the many developing AI chatbots used by students to aid their learning in higher education, its integration into pedagogical practices, such as teaching methods and classroom activities, is essential, as outlined by Xiao and Zhi (2023). This integration not only augments students' learning experiences and provides them with a more personalised and interactive approach to education but also promotes responsible and effective use of the tool. Selim (2024) suggested that ChatGPT as a writing support tool within university courses should be explored further, as this could enhance the curriculum by using ChatGPT to check for the accuracy of language use, proofreading, and improve writing skills. Moreover, clear policies that address ethical concerns, privacy and security issues, and academic integrity need to be established by policymakers and academic organisations regarding the use of ChatGPT in higher educational contexts to ensure that it aligns with educational standards and values (Chan & Hu 2023).

Limitations

In the literature examined in this research, there is limited information on a suitable and practical framework for integrating ChatGPT or other chatbots into higher education curricula. In the study conducted by Bonsu and Baffour-Koduah (2023), a student proposed a viable and practical framework for adapting and implementing the

chatbot. This framework is akin to a portal system designed to regulate its usage among students. However, no specific information or instructions have been provided to facilitate this integration.

There are some limitations in the process of conducting this review. First, only the researcher reviewed the search results. This means that bias assessment in the reviewed articles could not be performed thoroughly. The PRISMA checklist (PRISMA, 2024) suggests that at least two researchers should assess the studies in the articles and work independently. Nonetheless, the researcher adhered to a well-defined review protocol that detailed the research questions, criteria for inclusion and exclusion, search strategy, and methods for data extraction. Additionally, to reduce selection bias and ensure a thorough inclusion of relevant studies, the search for relevant articles was carried out using two search platforms. Furthermore, the focus was only on ChatGPT, despite numerous chatbots performing functions comparable to those of ChatGPT. Therefore, the findings cannot be generalised to other AI chatbots, such as Google Bard, Microsoft Edge Copilot, and ZenoChat. Further research should be conducted to investigate students' perceptions and ethical considerations regarding these other chatbots.

Recommendations for effective integration of ChatGPT in pedagogical practices

Despite the lack of specific information or instructions to facilitate the effective integration of ChatGPT into pedagogical practices in the literature reviewed above, some strategies are recommended.

As a research assistant, students can use it to research information on a particular topic and explain certain theories or concepts. Additionally, tutors could assist students with clear and concise prompts to harness the full benefits of ChatGPT.

As writing support, students can use it to suggest possible structures and as a dictionary or thesaurus.

As a tool to encourage critical thinking, students can analyse the information generated by ChatGPT for biases and accuracy.

As a tool for ethical considerations, students could discuss the parameters of using ChatGPT in their academic practices, particularly their assessments, to maintain academic integrity. In these discussions, students could collaboratively work with their peers and tutors to produce a set of guidelines for the ethical use of ChatGPT in their academic practices.

CONCLUSION

In conclusion, the literature highlights students' mixed views on the use of ChatGPT's for academic purposes. Overall, it can be concluded that students regard it as a valuable tool that could empower them and, to a certain extent, enhance their learning experiences. This is evident in the chatbot's ability to provide personalised learning support, ease of use, and accessibility. Nevertheless, students were also concerned about the accuracy and reliability of the information generated by ChatGPT, and overreliance could hinder the development of their academic and critical thinking skills and creativity. Considering the benefits and drawbacks of ChatGPT, it is important for higher educational institutions to acknowledge its potential integration into their pedagogical practices. As recommended above, this potential integration requires careful planning to include clear guidance and policies to ensure the responsible and appropriate use of the chatbot to benefit academics and students. Therefore, further research should be conducted into ChatGPT's effectiveness in enhancing students' educational experience, maximising its benefits, and addressing its challenges and ethical issues. It is believed that students will continue to use AI chatbot technology for academic purposes; hence, it is suggested that educational institutions embrace it instead of trying to deter its use as an academic support tool. In other words, ChatGPT could perhaps be used as a 'teaching assistant' or as an extension of a tutor.

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