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Research Article

Chatbot AWARE: A Thematic Literature Review on Chatbot Awareness, Workload-Based Adoption, Responsibility, and Ethics in Higher Education Institutions

Anthony U. Concepcion*

Bulacan State University – Bustos Campus, Philippines, 3017

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**Corresponding author:*
E-mail:
anthony.concepcion@bulsu.edu.ph

ABSTRACT

AI chatbots may improve learning, simplify teaching, and engage students at colleges and institutions. AWARE examined chatbots' effects on instructors and students. Awareness, ethics, responsibility, and workload-based adoption comprise the framework. By reviewing 19 scholarly sources, the researchers created the AWARE framework. Topics were sorted into four groups. Researchers ought to know the framework's pros and cons and smart uses. Online chatbots can teach, administer, and collect feedback, according to the study. There are however some problems, like lower emotional intelligence, the risk of disseminating false information, concerns about academic honesty, and the fact that not everyone can access the material. The study shows that chatbots can help with teaching instead of replacing it, as long as there are clear rules and a consistent way of teaching. The lack of lasting empirical evidence concerning the effectiveness of chatbots highlights the imperative for subsequent research aimed at measurable learning outcomes, equitable access, and the establishment of stringent ethical standards for AI integration in higher education.

Keywords: *Artificial Intelligence (AI), Chatbots, Academic integrity, Ethics, Higher education, Workload adoption*

Introduction

AI has quickly changed how students communicate to teachers, learn new things, and use digital technologies in the classroom during the past few years. Chatbots are one of the most important ways that AI has changed the way people learn. More people around the world want to use AI conversational agents to help them learn, as shown by the fact that they are becoming increasingly common in schools and other locations to study. Digital learning technologies are being employed in the Philippines and other developing nations to make it easier for students to get to school, become involved, and do their work. That potential is important.

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As more schools throughout the world implement hybrid and fully online teaching methods, it becomes clear how chatbots could help people in their communities. These tools help schools with few resources to teach better and give students ongoing aid with their studies, especially in rural or low-income areas. All around the globe are testing out chatbot systems to find out how well they function, how simple they are to use, and what they imply for learning. A greater number of individuals are discussing how the 21st century might transform the way we learn.

Furthermore, using chatbots in the classroom could assist or damage how students learn. They may be like virtual teachers, answering students' inquiries on a wide range of topics right away (Bravo & Cruz-Bohorquez, 2024). According to Tsivitanidou and Ioannou (2021), educational chatbots can help you learn at any stage of the process and in a lot of different ways, such as cognitive and emotional learning. They assist individuals learn by getting them interested in it, encouraging them to study on their own, and giving them practice that is right for them. According to Huang, Hew, and Fryer (2021), chatbots are speedier and more useful than other technologies. They can be used to help people learn a new language and talk to each other. Academic work may suffer from privacy and data security concerns (Davar, Dewan, and Zhang, 2025). Also, problems are novelty, technology, and thinking more (Head, 2025). Despite criticisms (Davar, Dewan, and Zhang, 2025; Tsivitanidou and Ioannou, 2021), several schools use chatbots to enhance learning.

This study investigates students' views on chatbots in education and their advantages and cons. The study explores how students utilize chatbots for their studies, their insights, and their issues, particularly academic honesty, ease, and customization. This project uses chatbots in local schools to demonstrate their efficacy in community-based learning. This will make AI communication in education easier and more accessible to diverse groups.

Some recent research analyzes how AI chatbots like ChatGPT affect college and university students. More studies demonstrate that schools are using AI. It shows that it can be useful in real life, but it also makes you think about what is right and wrong. These tools are helpful for research and making services better for students (Dempere, Modugu, Hesham, & Ramasamy, 2023). Schools employ them to assist learners in coming up with ideas, write summaries of articles, and answer questions about their lessons. They chat about their fears of cheating and being honest in school (Gruenhagen et al., 2024). It's hard to detect the difference between help and cheating when students utilize chatbots to get help with their homework.

No matter what they're learning, most students desire to use ChatGPT for academics (Heard, 2025). Many individuals think that AI chatbots can help students learn more quickly, get more done, and learn about a wide range of topics. There are also moral considerations to worry about, as more than a third of the students who took the exam used chatbots without knowing it was prohibited (Gruenhagen, J. H., et. Al., 2024). Student ignorance of AI academic integrity is shown.

These resources need explicit functioning rules in higher education (Heard, 2025; Khandakar, H., et. al., 2024). Without rules, students and teachers are unsure of school conduct. Reprehensible behavior may disrupt order in such situations. Rethinking student testing and using AI-powered chatbots to make classroom learning more collaborative are also significant (Gruenhagen, J. H., et.al., 2024; Khandakar, H., et. al., 2024). Because our current testing tools may not function, we need to develop AI-based ones.

Universities still struggle to define and implement ethical and moral principles. Schools should teach via AI chatbots. As artificial intelligence advances, children must learn honesty and autonomy. Teachers are concerned about AI chatbots like ChatGPT from 2022. Students' language and critical thinking skills are deteriorating, but removing technology from schools may not help. Teachers fear chatbots like ChatGPT would make test cheating easier. ChatGPT helps students write essays (Roose, K., 2022; Shankland, S., 2022). Using ChatGPT to create essays fast may hinder students' learning. Jeff Maggioncalda, Coursera's

CEO, believes ChatGPT will transform schools, particularly testing.

Methodology

This study employed a thematic literature review methodology. Thematic analysis (TA) looks for, studies, and describes noteworthy patterns, or "themes," in qualitative data (Clarke, V., 2017). It was exciting to read and look at study papers regarding how colleges and universities use AI chatbots. We looked at the material based on how valuable, important, and up to date it is currently. A thematic literature review was used in this study. Thematic analysis (TA) is a method for finding, looking at, and understanding interesting patterns in qualitative data, which are also known as "themes" (Clarke, V., 2017). The researcher collected and read scholarly articles concerning how AI chatbots are employed in colleges and universities. Also, the researcher looked at the literature to assess how essential, valuable, and relevant it is now. And used the four main elements of the AWARE framework—Awareness, Workload-Based Adoption, Responsibility, and Ethics—to sort the results into groups. The following goals were taken into account when the study was being planned:

1. To collect and review academic sources related to AI chatbots and their use in higher education.
2. To categorize the findings into:
   a. Awareness,
   b. Workload-Based Adoption,
   c. Responsibility, and
   d. Ethics; and
3. To propose insights and possible frameworks for future research of the integration of chatbots in higher education.

Results/Findings

Table 1. Review of Related Literature Analysis

AWARE Framework		
Study	**Key Findings**	**Enhancement and Limitations**
	AWARENESS	
Popenici, S. A. D., & Kerr, S. (2017)	Education is a human-focused system, not an AI-based solution. Artificial Intelligence in Education (AIEd) purpose is to improve human cognition and facilitate the learning process, rather than to provide content, control, and assessment. The purpose of AI Chatbots is to improve human cognition and facilitate the learning process, rather than to provide content, evaluation, and management.	The ambiguity about the comparison between AI input and traditional feedback hinders comprehension of its actual influence on learning outcomes. Additional empirical validation is required.
Richter, O. Z., Marín, V. I., Bond, M., & Gouverneur, F. (2019).	Additional research is required about the technological aspects of AI chatbots, with a predominance of quantitative methodologies in empirical investigations.	A deficiency of research exists from a technical or technological perspective, particularly those employing qualitative methodologies. This results in a distorted perception of chatbot efficacy.
Reiss, M. J. (2021)	AIEd possesses the capacity to yield substantial beneficial impacts on education.	The term "capacity" is hypothetical in the absence of rigorous, long-term research that validates these contributions across several disciplines.
Dignum, V. (2021)	AIEd is evidently essential for the public to transition from passively accepting or rejecting technology to	Public digital literacy and opportunities for engagement in AI co-design are notably restricted, particularly

AWARE Framework		
Study	**Key Findings**	**Enhancement and Limitations**
	actively participating in the innovation process.	among marginalized or minority academic communities.
Farrokhnia, M., Banihashem, S. K., Noroozi, O., & Wals, A. (2023)	The influence of AI-generated feedback on learning outcomes remains unclear when compared to conventional feedback sources.	In the absence of explicit measurements or comparison analysis, educators may lack confidence in when or how to rely on AI-generated feedback.
Kasneci, E., et al. (2023)	The implementation of AI chatbots in education represents a promising research domain that has numerous chances to improve students' learning experiences and assist educators' efforts.	Promising research may elevate expectations; the absence of practical implementation studies limits transition into classroom environment practice.
WORK-BASED ADOPTION		
Chassignol, M., Khoroshavin, A., Klimova, A., & Bilyatdinova, A. (2018)	AI chatbots have significantly impacted students by assisting them in overcoming challenges and enhancing their educational experience, yet AI will not entirely replace traditional educational institutions.	The magnitude of this "profound influence" is frequently anecdotal or transient, devoid of quantifiable long-term academic results.
Richter, O. Z., Marín, V. I., Bond, M., & Gouverneur, F. (2019)	AI chatbots can assist students, instructors, and administrators.	The absence of integration guidelines results in divided or inconsistent implementation at various institutional levels.
Chen, L., Chen, P., & Lin, Z. (2020)	AIEd has notably influenced educators by utilizing AI chatbots to enhance productivity in various academic tasks. Students can have a more profound and enriching educational experience through practical or experiential learning. The beneficial impacts of AI chatbots surpass the detrimental effects.	Educators may develop an excessive reliance on AI for administrative efficiency, thereby undermining essential educational involvement.
Farrokhnia, M., Banihashem, S. K., Noroozi, O., & Wals, A. (2023)	AI chatbots can enhance individualized education. AI chatbots possess the capability to produce credible and instantaneous feedback.	Chatbots may fail to effectively comprehend intricate student input, resulting in generic or misleading tailored responses.
Lo, C. K. (2023)	AI chatbots possess potential advantages while functioning as assistants to instructors and virtual tutors for learners.	Chatbots possess insufficient emotional intelligence, hence constraining their efficacy in providing complex academic or personal assistance.
RESPONSIBILITY		
Dignum, V. (2021)	The efficacy of AIEd is reliant upon its impact on human well-being.	Research on the effects of AIEd on the psychological, emotional, and cognitive well-being of varied student populations is scarce.

AWARE Framework		
Study	**Key Findings**	**Enhancement and Limitations**
Bartoletti, I. (2022	Institution regulation is necessary for the implementation of AIEd. Any implementation of AI chatbots in education must embody the function of education as an instrument for fairness and advancement. Artificial intelligence must be governed and regulated by humans.	Existing laws are either nonexistent or antiquated, resulting in a regulatory gap that renders educational institutions susceptible to exploitation.
Kasneci, E., et al. (2023)	Notwithstanding several problems and challenges, the identified risks are controllable and warrant attention to deliver reliable solutions.	The phrase "controllable" is ambiguous, because institutions may lack the means or knowledge to effectively reduce these risks.
ETHICS		
Chassignol, M., Khoroshavin, A., Klimova, A., & Bilyatdinova, A. (2018)	AI chatbots cannot achieve accuracy in all circumstances without human guidance.	Excessive confidence in AI precision may result in diminished human oversight, risking the exposure of students to erroneous information.
Zhang, K., & Aslan, A. B. (2021)	The engagement of learners diminished after one week of interaction with AI chatbots, whereas those in human-peer situations showed a lower likelihood of such decline.	AI is deficient in the relationship attributes and flexibility necessary to maintain student attention over extended periods.
Reiss, M. J. (2021)	The impact of AI on education may be negative, potentially worsening educational disparity in the initial stages of AI chatbot implementation.	Resource-constrained institutions may use AI without thorough assessment, worsening existing gaps.
Bartoletti, I. (2022)	AI chatbots can significantly enhance teaching but also exacerbate ineffective pedagogical ideologies.	AI systems developed using substandard or biased content can perpetuate erroneous instructional methods on a large scale.
Lo, C. K. (2023)	Nonetheless, it prompts doubts over the production of inaccurate or misleading information and its jeopardization of academic integrity.	Students may exploit AI-generated content without adequate direction or citation, heightening the risks of plagiarism and inaccuracy.

Discussions

This study used a thematic literature review method to look at existing academic sources and find and explain common themes in the discussion of using AI chatbots in higher education. The AWARE framework, which stands for Awareness, Workload-Based Adoption, Responsibility, and Ethics, was used to sort the results. This section talks about the good and bad things of each subject, looking at both the theoretical outcomes and how they could work in the real world.

1. The use of AI chatbots in higher education

The study gathered and examined extensive scholarly research regarding the role, potential, and constraints of AI chatbots in higher education, organized according to the AWARE framework. This research utilized a thematic literature review. The researcher examines scholarly papers about AI chatbots in higher education. Also, the researcher looked at the material and decided how valuable, important, and relevant it was right now. This research employed a thematic literature review. The-

matic analysis (TA) assists in identifying, analyzing, and understanding qualitative data "themes" (Clarke, V., 2017). The researcher looked at scholarly articles about AI chatbots in higher education. Also, the researcher looked at how relevant, valuable, and important the literature was. The AWARE framework's four main ideas—Awareness, Workload-Based Adoption, Responsibility, and Ethics—were used to organize the results.

2. AWARE Framework

2.1 Awareness

A lot of research has shown that education is naturally focused on people. Applications of AI in education (AIEd) should aid learning, not replace it. With chatbots, students can learn, remember what they've learned, and ask questions. This supports the idea that AIEd should improve how people think and learn, not how to teach (Holmes, 2022).

Artificial Intelligence in Education (AIEd) should be understood as a human-focused system designed to enhance learners' cognitive developments such as critical thinking, metacognition, and self-regulated learning—rather than to replace educators. Within this framework, AIEd functions as a supportive and adaptive tool that assists instructional processes by providing feedback, personalization, and learning analytics, while educators retain authority over pedagogical decisions, ethical judgment, and contextual interpretation. This human-in-the-loop orientation reinforces the role of teachers as intellectual mentors and moral agents, ensuring that AI serves as a means of cognitive augmentation and not as an autonomous substitute for professional teaching practice.

The problem lies in the limited understanding of how feedback made by AI changes real-life learning. It remains unclear how chatbots' quick comments help students think more deeply or study more deeply. Not enough research, especially qualitative study, has been done on how AI chatbots work. Thus, it is hard to fully comprehend how they function in schools. Readings say that AI needs to get better at working with governments and schools. A few changes need to be made to get people to stop just using things and start actively contributing to creativity. In other words, both students and teachers need to get better at using AI and technology.

2.2 Workload-Based Adoption

Chatbots can aid students, teachers, and school authorities. AI was being used by more and more people to obtain help with their assignments and get individualized guidance and comments. A lot of research shows that chatbots make school a better place to be and help students learn.

Also, teachers thought their occupations were less stressful, especially since they had to do the same things again and over. In short, chatbots are like teachers who help students learn, whether they are alone or with a lot of other people. These figures demonstrate that AIEd is increasingly important for education improvement.

Chatbots supplement education, not replace it. Some schooling areas require further clarity. Mentoring, emotional intelligence, and novel teaching methods. Not using or challenging some technologies can hide how hard school is.

Workload-based adoption of Artificial Intelligence in Education (AIEd) requires a clear distinction between its administrative and pedagogical functions to avoid conflating efficiency gains with learning outcomes. On the administrative level, AIEd can reduce teacher workload by automating routine and time-intensive tasks such as grading, attendance tracking, scheduling, and basic feedback generation. These efficiency-oriented applications primarily benefit educators by freeing time for higher-value professional activities, including curriculum design, mentoring, and reflective teaching.

In contrast, pedagogical benefits of AIEd are realized when AI systems are intentionally designed to support learning processes, such as personalized tutoring, adaptive feedback, and scaffolded inquiry for students. These applications directly influence cognition by responding to individual learning needs, pacing, and misconceptions. Importantly, administrative efficiency does not automatically translate into pedagogical improvement; effective AIEd

adoption depends on aligning AI use with instructional goals and maintaining educator oversight. Distinguishing between these two domains ensures that AI is adopted not merely as a workload-reduction tool, but as a pedagogically meaningful, human-guided educational support system.

2.3 Responsibility

For accountability, HEIs must develop health and society-focused AI initiatives. Evaluation of AIEd should include efficacy and fairness (Dignum, V., 2021). According to the findings, schools and colleges should explain AI. Fairness, honesty, and accessibility should govern school chatbots. This suggests that schools should employ technology to improve.

Unregulated activities always fail. AI is used at many institutions and schools, but they don't always consider potential issues or train teachers and students for its proper usage. It may be difficult to use and complete.

2.4 Ethics

Literature addressing morality increased. Chatbots teach, yet they raise moral issues. They can spread disinformation, damage academic reputations, and teach poorly if misused. Not every student can use AI, and chatbots may not help those with fewer opportunities. AI's also have tendency to fake threatens professors' credibility, says literature. Chatbot tests and lecturers using AI-generated stuff without reviewing it are worse. These findings suggest that AI deployment campaigns should include ethics and explain the merits and cons of AI in education.

Based on extensive research, chatbots may improve higher education. However, it is necessary to exercise extreme caution in their use, ensuring awareness, effective management, and moral responsibility.

The AWARE framework helped both educators and students think about the pros and cons of using AI chatbots in the classroom. Schools need to talk about and learn more about AI technologies because they are being deployed so quickly. They need to make sure that they don't hurt the most crucial part of education: the individuals who are learning.

3. Frameworks for future research on how to use chatbots in higher education.

3.1 Use Experimental Quantitative Research

The study's results show that improvements can be made by looking into different ways of doing research on AI applications that involve both students and teachers in quantitative research.

3.2 Research Expansion

The researchers recommend broadening the study into a university-wide project to promote the future incorporation of AIEd Chatbots in Higher Education Institutions.

Conclusions

This study investigated the use of AI chatbots, including ChatGPT, in higher education by analyzing literature within the AWARE framework, which encompasses Awareness, Workload-Based Adoption, Responsibility, and Ethics. The research shows that chatbots can help learners finish their schoolwork faster, give them personalized help, and keep them interested. Still, schools and colleges should use these benefits in a way that is morally responsible.

Researchers also say that teachers and students should understand the limits of artificial intelligence. People need to know this so they can use technology wisely. By using AI chatbots in their teaching, teachers can give students more freedom. However, do this with care and responsibility. Educators use these technologies in different ways, which makes it harder to use them safely and responsibly. It is important to make rules stricter. Lying and spreading misleading information makes it harder to learn, thus these rules should help clarify things.

Artificial intelligence in the field of education is still fundamentally flawed. Chatbots can spread false or biased information, which might make the resource limitations that schools are already dealing with even worse. Overusing artificial intelligence in schools could make it harder for people to engage with each other in real life. Chatbots cannot fully meet the needs of learners since they can't read complicated emotional cues correctly. Without

clear instructions, compliance is usually at danger. There is not much scientific information about how artificial intelligence will affect education in the long run, so we need to keep a close eye on its effects.

Chatbots and other AI technologies are not meant to be used for teaching. When used correctly, these resources can be used to teach. As more schools and corporations use AI, kids need to learn about ethics, job prospects, and fair access to education. AWARE helps schools and other organizations use AI tools ethically, especially in how they affect children.

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