ASCILITE 2026

The Future is Connection:

Collaboration, Creativity and Compassion in a Digital Society

Conversational pedagogy in practice: Exploring a unit-embedded GenAI chatbot in higher education

Meena Jha, Stephen Colbran, Caitlin Schiavone

Central Queensland University

Generative artificial intelligence (GenAI) chatbots are increasingly being adopted in higher education; however, limited research has examined their pedagogical integration within learning environments. This paper reports findings from an exploratory mixed-methods case study of a GenAI chatbot embedded in a postgraduate unit at an Australian university. Designed as a pedagogically embedded learning companion, the chatbot provided contextualised guidance and functioned as a first point of contact for students seeking clarification and support. Findings indicate that students perceived the chatbot as a useful and accessible learning resource that supported engagement, reflection, and self-directed learning. Three themes emerged: first-contact pedagogical support, AI-mediated scaffolding, and human-AI complementarity. Students valued the immediacy and contextual relevance of responses while recognising the continuing importance of educator guidance. These initial findings provide insights into the design of pedagogically embedded GenAI learning companions and their potential role in supporting learning within higher education.

Keywords: Generative AI, conversational pedagogy, educational chatbots, higher education, self-regulated learning

Introduction

Generative artificial intelligence (GenAI) is reshaping higher education by creating new opportunities for personalised learning support, feedback, and student engagement (Agyekum et al., 2025; Aslan et al., 2025). Rather than resisting its adoption, educators are increasingly exploring ways to integrate GenAI into teaching and learning practices (Watermeyer et al., 2025). Institutional policies and regulatory frameworks continue to evolve (Atif et al., 2025) to support the ethical and responsible use of GenAI within higher education (TEQSA, 2025). Conversational AI chatbots have attracted growing attention for their capacity to provide immediate, interactive, and scalable assistance beyond scheduled teaching interactions (Atif et al., 2021; McTear, 2021; Rudolph et al., 2024). Despite this growing interest, much of the literature focuses on the capabilities of conversational AI rather than how such systems can be pedagogically embedded within learning environments to support student learning (Yusuf et al., 2025). Questions remain regarding how conversational agents can function as learning companions that complement educator support while promoting engagement, reflection, and self-directed learning (Colbran et al., 2026; Koh et al., 2024). To explore this issue, a GenAI chatbot, Neena, was embedded within a postgraduate unit[1] at an Australian university in Information and Communication Technology (ICT). The chatbot was designed as a unit-specific learning companion, grounded in unit materials and aligned with intended unit learning outcomes. Rather than providing direct answers, it aimed to support learning through contextualised guidance and scaffolded interaction, consistent with principles of conversational pedagogy and self-regulated learning (Alexander, 2018; Chang et al., 2023).

This paper reports initial findings from an exploratory case study examining students' experiences of using the chatbot. The study contributes early insights into how pedagogically embedded GenAI chatbots may function

[1]A unit at an Australian university is an individual component of study that focuses on a specific topic. Full-time students typically take three to four units per semester, and a set number of units are combined to make up a student's broader course (or degree program).

as first-contact learning support, facilitate AI-mediated scaffolding, and complement educator support within higher education. The study addresses the following research questions (RQ):

RQ1: How do students perceive the role of a pedagogically embedded GenAI chatbot in supporting their learning?
RQ2: How do students experience AI-mediated scaffolding through interactions with the chatbot?
RQ3: How do students perceive the relationship between chatbot support and educator support within the learning environment?

Background

GenAI has accelerated interest in conversational AI as a mechanism for supporting teaching and learning in higher education (Rudolph et al., 2024). Unlike earlier rule-based chatbots, contemporary LLM-powered systems can generate contextually relevant responses, engage in multi-turn dialogue, and provide personalised support across a range of educational tasks (Guan et al., 2026). These capabilities have prompted growing interest in the potential of conversational agents to support learner engagement, feedback, and self-directed learning (Younas et al., 2025). However, the educational value of conversational AI extends beyond technological capability (Bettayeb et al., 2024). The effectiveness of GenAI systems depends on how they are integrated into pedagogical practice and aligned with intended learning outcomes (Webb & Galamba, 2026). From a conversational pedagogy perspective, learning is viewed as an iterative process of dialogue, reflection, and knowledge construction (Al Issa & Maheshwari, 2025).

Educational chatbots have been associated with several benefits, including improved access to learning support (Labadze et al., 2023), timely feedback (Kuhail et al., 2023), and increased learner engagement (Ait Baha et al., 2024). Conversational agents can also support self-regulated learning by encouraging reflection, guiding problem-solving processes, and helping learners monitor their understanding (Du, 2025; Lin & Chang, 2023) . At the same time, concerns remain regarding the potential for over-reliance on AI-generated responses, reduced critical engagement, and the need for appropriate pedagogical and ethical safeguards (Abubakar et al., 2025). Consequently, there is increasing recognition that conversational AI should be positioned as a complement to, rather than a replacement for, human teaching (Ji et al., 2023). In this view, educators retain responsibility for designing learning experiences and fostering critical thinking, while conversational agents provide immediate and contextualised support that extends opportunities for learning beyond formal teaching interactions and standard teaching timetables. Such a perspective aligns with the notion of AI as a learning companion that augments learning through dialogue, guidance, and feedback on a continuous basis.

Empirical research examining pedagogically embedded conversational agents within authentic higher education learning environments remains limited (Ganguly et al., 2025). While existing studies have demonstrated the technical capabilities of conversational AI, less attention has been given to how such systems function as learning companions that complement educator support and promote engagement, reflection, and self-directed learning. Consequently, there remains a need for contextually grounded research examining how students experience pedagogically embedded conversational agents in practice (Ji et al., 2023; Koh et al., 2024). This study addresses this gap through an exploratory examination of a GenAI chatbot embedded within a postgraduate unit at an Australian university. By investigating students' experiences and perceptions, the study provides initial insights into how conversational AI can function as first-contact pedagogical support, facilitate AI-mediated scaffolding, and complement educator support within higher education. These considerations highlight the importance of establishing explicit pedagogical design principles when developing conversational AI learning experiences.

Neena chatbot design

The chatbot Neena was developed as a pedagogically embedded conversational agent to support learning within a postgraduate unit. Rather than functioning as a general-purpose AI tool, the chatbot was designed as

a unit-specific learning companion aligned with unit learning outcomes, assessment requirements, and learning resources.

The design of Neena was informed by principles of conversational pedagogy, which view learning as a process of dialogue, reflection, and knowledge construction (Alexander, 2018). Consistent with this perspective, the chatbot was intended to facilitate learning through guided interaction rather than answer provision. The design also drew on principles of self-regulated learning, with the chatbot encouraging students to reflect on problems, explore alternative approaches, and develop greater independence in their learning processes (Chang et al., 2023). To support pedagogical alignment, Neena was configured using curated unit materials, including lecture resources, tutorial activities, assessment information, and supporting learning materials. This grounding was intended to ensure that responses remained relevant to the learning context and reflected the concepts, terminology, and expectations of the unit. By embedding the chatbot within the learning environment, students were provided with access to contextualised support throughout the teaching term.

A key design feature was the implementation of pedagogical guardrails. Rather than providing direct solutions to assessment tasks, the chatbot was configured to offer scaffolded guidance through prompting, questioning, and explanatory feedback. This approach was intended to support learning while maintaining academic integrity and encouraging active engagement with course content (Koh et al., 2024). To further support the quality and reliability of responses, the chatbot's prompts, instructional configuration, and sample outputs were reviewed by members of the teaching team prior to deployment. This review process evaluated the accuracy, relevance, and pedagogical appropriateness of responses in relation to unit content and learning outcomes. Feedback from the academic reviewers informed refinements to the chatbot configuration and helped ensure that responses aligned with the educational objectives of the unit.

The chatbot was deployed within the university learning management system Moodle and made available as an optional support resource throughout the semester. Students could engage with the chatbot at any time to seek clarification, explore concepts, and obtain guidance related to unit content. Figure 1 presents an overview of the pedagogical design and implementation of the Neena chatbot. In this way, Neena was positioned as a complementary learning companion that extended opportunities for support beyond scheduled teaching interactions while preserving the central role of educators in facilitating deeper learning, critical reflection, and disciplinary understanding. These design features were intended to position Neena as a first-contact source of pedagogical support that encouraged reflection, self-directed learning, and active engagement with unit content.

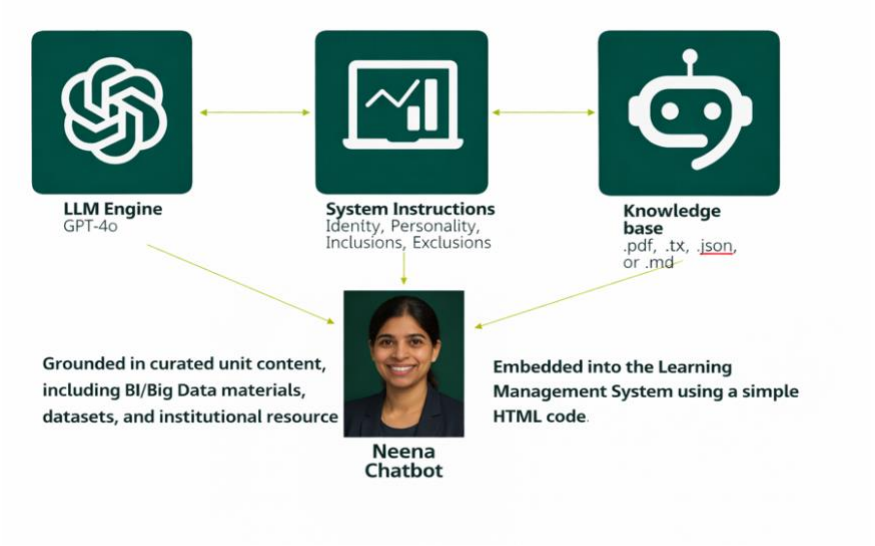


Figure 1
Pedagogical architecture of Neena Chatbot

Pedagogical design principles

Table 1 summarises the pedagogical design principles that informed the development of Neena as a pedagogically embedded learning companion. These principles positioned Neena as a pedagogically embedded learning companion that sought to extend opportunities for learning beyond scheduled teaching interactions. The emphasis on contextualised guidance, scaffolding, and learner autonomy was intended to support meaningful engagement with unit content while maintaining appropriate educational and ethical boundaries.

Table 1
Pedagogical design principles underpinning Neena

Design Principle	Educational Purpose	Implementation
Contextualised learning support	Provide guidance relevant to unit content and learning outcomes	Responses grounded in curated unit materials, including lectures, tutorials, and assessment information
Scaffolded learning	Encourage active problem-solving and conceptual understanding	Guided questioning, prompts, and explanatory feedback rather than direct answer provision
Self-regulated learning	Promote learner reflection and independence	Encouraged students to monitor understanding, reflect on responses, and consider alternative approaches
Academic integrity	Support learning while discouraging inappropriate use of AI	Restricted direct solutions to assessment tasks and redirected interactions towards conceptual understanding and problem-solving processes
Human-AI complementarity	Position AI as a support mechanism rather than a replacement for educators	Designed as a first-contact source of support while maintaining the lecturer's role in facilitating deeper learning and critical reflection

Methodology

Research design

This study adopted an exploratory mixed-methods case study approach to investigate students' experiences of a pedagogically embedded GenAI chatbot within a postgraduate unit during Term 1, 2025. Case study research is appropriate for examining contemporary educational interventions situated within authentic learning contexts (Yin, 2018). Given the emerging nature of conversational AI in higher education, the study sought to generate contextually grounded insights into students' perceptions and experiences rather than establish causal relationships. A mixed-methods approach was employed, combining quantitative and qualitative survey data to provide a more comprehensive understanding of students' experiences of using the chatbot (Creswell & Plano Clark, 2018). Fourteen students completed the survey. Thirteen respondents reported using the chatbot and were therefore eligible to complete the chatbot evaluation items.

Context and participants

The study was conducted within a postgraduate unit at an Australian university. The unit enrolled 18 students from diverse academic and professional backgrounds, including computing, analytics, and business-related disciplines. Neena was integrated into the university's Moodle learning management system and was available throughout the teaching term as an optional learning support resource. Access was provided through a dedicated frame link embedded within the unit site, allowing students to engage with the chatbot directly from the learning environment without requiring access to external applications or platforms. All enrolled students had access to the chatbot, and 14 students completed the survey, representing a response rate of

77.8%. The study therefore represents a context-specific exploratory case study of one postgraduate unit rather than a generalisable evaluation across multiple teaching contexts.

Data collection

Data were collected at the conclusion of the teaching term through an anonymous online survey administered using Qualtrics. The survey was designed to explore students' perceptions of the chatbot's usefulness, their experiences of interacting with the system, and opportunities for future development. The instrument comprised both closed-ended and open-ended questions aligned with the study research questions. Closed-ended items examined perceptions of learning support, engagement, and overall usefulness, while open-ended questions invited participants to reflect on the strengths, limitations, and potential improvements of the chatbot. The combination of quantitative and qualitative data enabled the triangulation of findings and provided richer insights into student experiences.

Data analysis

Quantitative survey responses were analysed using descriptive statistics, including frequencies and percentages, to identify patterns in student perceptions. Given the exploratory and context-specific nature of the study, the analysis focused on describing trends rather than conducting inferential statistical testing. Qualitative responses were analysed using reflexive thematic analysis (Braun & Clarke, 2022). The analysis involved familiarisation with the data, coding, theme development, and iterative refinement. To enhance the trustworthiness of the analysis, emerging codes and themes were reviewed and discussed collaboratively by three members of the research team. This process supported the development of themes that captured how students experienced and perceived the chatbot within the learning environment. Representative participant quotations are presented in the findings to illustrate the identified themes.

Ethical considerations

Ethical approval for the study was obtained through the university's Human Research Ethics process prior to data collection. Survey responses were anonymous and reported in aggregate form to ensure confidentiality and protect participant privacy.

Findings

Fourteen students completed the survey, of whom 13 reported using the chatbot. The findings are presented in relation to the three research questions. Analysis of survey responses identified three interconnected themes: (1) first-contact pedagogical support, (2) AI-mediated scaffolding for learning, and (3) human–AI complementarity (Table 2).

Table 2
Themes emerging from student responses

Theme	**Description**	**Representative Quote**
First-contact pedagogical support	Immediate access to clarification and guidance before seeking lecturer assistance	"*It was helpful because I could quickly check things before going to the lecturer*"
AI-mediated scaffolding	Guided questioning and reflective support rather than direct answer provision	"*It made me think through the problem instead of solving it for me*"
Human-AI complementarity and future adoption	Chatbot viewed as a support tool that complements rather than replaces educators	"*It's great for quick help, but I still prefer talking to my lecturer for deeper discussion*"

As shown in Figure 2, students reported positive perceptions across all evaluation dimensions. The highest ratings were associated with relevance, accuracy, understanding, personalisation, satisfaction, ease of use, and recommendation (85.7%), while effectiveness and conversational naturalness were rated positively by 78.6% of respondents.

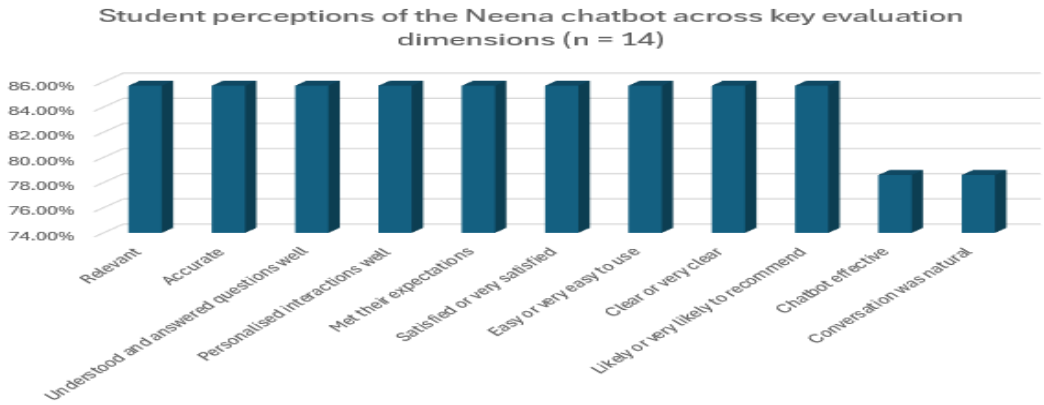


Figure 2. *Student perceptions of the Neena chatbot (n = 14)*

RQ1: First-contact pedagogical support

Students reported highly positive perceptions of the chatbot's ability to provide timely and contextually relevant support. Twelve of the 14 respondents (85.7%) indicated that the chatbot generated relevant responses, accurately addressed their questions, and demonstrated an understanding of their queries. An equal proportion reported that the chatbot personalised interactions effectively and met their expectations as a learning support resource.

Analysis of the qualitative responses suggests that students primarily engaged with the chatbot when seeking clarification of concepts, assessment requirements, or learning materials. Rather than replacing existing support structures, Neena appeared to occupy an intermediary role within the learning environment, providing immediate access to guidance while reducing reliance on synchronous interactions with teaching staff. Several participants described using the chatbot to verify their understanding before consulting lecturers or tutors, indicating that the system was perceived as a readily available source of support embedded within the unit context.

Students also valued the contextual grounding of responses. Comments suggested that the chatbot's usefulness stemmed not only from its accessibility but also from its alignment with unit materials and learning activities. This enabled students to obtain clarification that was perceived as relevant to the specific learning context rather than generic AI-generated assistance. These findings indicate that students perceived Neena as an accessible and contextually aligned source of pedagogical support that could be consulted at the point of need during the learning process.

RQ2: AI-mediated scaffolding for learning

Students generally perceived the chatbot as a useful learning support tool that facilitated engagement with unit content through guided interaction. Twelve of the fourteen respondents (85.7%) reported that the chatbot was easy to use, provided clear responses, and supported their learning needs. In addition, 11 respondents (78.6%) rated the chatbot as effective, suggesting that students viewed the system as contributing positively to their learning experience.

Qualitative responses indicated that students valued the chatbot not only for providing information but also for supporting learning processes. Participants frequently described interactions that encouraged them to work through problems, reflect on concepts, and consider alternative approaches. Rather than seeking direct

answers, students often engaged with the chatbot as a conversational resource that facilitated exploration and understanding.

Several responses highlighted the chatbot's use of prompting and guided questioning. Students reported that these interactions helped them clarify their thinking and engage more actively with learning tasks. This was particularly evident when participants described using the chatbot to unpack complex concepts or verify their understanding before progressing with assessment-related activities.

Students also emphasised the value of being able to engage with the chatbot at their own pace. The conversational format enabled learners to revisit explanations, ask follow-up questions, and explore concepts in a low-pressure environment. Such interactions appeared to support learner autonomy by allowing students to direct their own inquiry while remaining grounded in the context of the unit. The findings suggest that students perceived value in the chatbot's capacity to facilitate reflection, leading to problem-solving and self-directed engagement with learning rather than simply acting as an information retrieval tool.

RQ3: Human-AI complementarity and future adoption

Students expressed strong support for the continued use of the chatbot within the unit. Twelve of the 14 respondents (85.7%) reported being satisfied or very satisfied with their interactions, and an equal proportion indicated that they would be likely or very likely to recommend the chatbot to other students. Similarly, 12 respondents (85.7%) reported that the chatbot met their expectations as a learning support tool, while 11 respondents (78.6%) perceived interactions as natural and conversational.

Analysis of the qualitative responses suggests that students viewed the chatbot as a complementary component of the learning environment rather than a substitute for lecturer or tutor support. Participants valued the immediacy, accessibility, and convenience of chatbot interactions, particularly when seeking clarification outside scheduled teaching sessions. At the same time, students recognised the continuing importance of educators in providing deeper explanation, feedback, and disciplinary guidance. Several responses indicated that students perceived the chatbot and educator as serving different but complementary functions. While the chatbot was viewed as useful for clarification, exploration, and immediate support, more complex conceptual discussions and nuanced feedback were still associated with human teaching staff. This suggests that students did not perceive AI support and educator support as competing alternatives, but rather as interconnected elements within a broader learning support ecosystem.

Students also identified opportunities for future enhancement. The most frequently suggested improvements related to multimodal functionality, including the ability to upload screenshots, images, and other visual materials. Participants additionally highlighted opportunities to improve conversational naturalness and interaction quality. Despite these suggested enhancements, responses indicated broad acceptance of the chatbot and strong support for its continued use within future offerings of the unit. The findings suggest that students perceived value in conversational AI when it was positioned as a pedagogically embedded support mechanism that complemented, rather than replaced, educator expertise.

Discussion

This study examined students' experiences of a pedagogically embedded GenAI chatbot within a postgraduate unit. The findings provide initial insights into how conversational AI can function as a learning companion when designed around pedagogical principles rather than technological capability alone. While the study does not seek to establish effectiveness, the findings suggest that students perceived value in the chatbot as a contextualised and accessible source of learning support. The positive perceptions reported across relevance (85.7%), accuracy (85.7%), understanding (85.7%), and personalisation (85.7%) suggest that students viewed the chatbot as a credible and contextually grounded source of support rather than a generic AI tool.

The findings suggest that Neena functioned as a first-contact pedagogical support layer situated between independent study and educator support. Students consistently described using Neena to obtain clarification, explore concepts, and address questions before seeking assistance from lecturers. This finding aligns with

research suggesting that conversational AI can extend access to learning support beyond scheduled teaching interactions while providing timely and responsive feedback (Atif et al., 2021; Kuhail et al., 2023). Students did not perceive the chatbot as a replacement for educators. Rather, the chatbot appeared to function as a complementary layer of support that helped maintain learning momentum when students encountered difficulties. This finding reinforces emerging perspectives that position AI and educators as collaborative contributors within the learning environment rather than competing sources of expertise (Koh et al., 2024). The educational value emerges when AI supports selected teaching tasks while educators retain responsibility for deeper pedagogical and disciplinary guidance (Koh et al., 2024).

A second contribution relates to the chatbot's role in supporting scaffolded learning. Students frequently reported that Neena encouraged them to think through problems rather than simply providing answers. This finding is significant because concerns regarding GenAI in higher education often focus on learner dependency and the passive consumption of AI-generated responses (Zhan et al., 2025; Zhang et al., 2024). In contrast, the pedagogical guardrails embedded within Neena were intended to redirect students towards reflection, questioning, and problem-solving processes. Student responses suggest that this design approach supported active engagement with learning tasks and aligns with conversational pedagogy, where dialogue is used as a mechanism for knowledge construction and conceptual development (Alexander, 2018). The findings therefore support growing calls for GenAI systems that prioritise guided inquiry and reflective engagement rather than answer provision alone (Chia & Frattarola, 2025).

The findings also highlight the importance of pedagogical alignment in the design of educational chatbots. Students consistently valued the contextual relevance of chatbot responses and the grounding of interactions within unit content. This suggests that educational usefulness may depend not only on conversational capability but also on the extent to which AI systems are embedded within disciplinary and curricular contexts. The findings suggest that the original pedagogical design principles were reinforced and refined through the emerging themes, demonstrating an iterative relationship between chatbot design and students' experiences. Recent scholarship has increasingly argued that GenAI tools should be integrated into learning environments through intentional pedagogical design rather than deployed as generic technological solutions (Labadze et al., 2023).

The findings reported here support these perspectives by suggesting that students recognised both the value and limitations of conversational AI. Rather than viewing the chatbot as a substitute for human teaching, participants positioned it as a supplementary learning resource that extended opportunities for engagement and support. This perception is consistent with emerging models of AI-enhanced education that frame conversational agents as learning companions capable of supporting self-regulated learning while maintaining the central role of educators in facilitating deeper understanding and critical thinking (Jeon & Lee, 2023; Koh et al., 2024).

These findings suggest that the contribution of conversational AI in higher education may lie less in automation and more in its capacity as a tool to provide contextualised, immediate, and pedagogically aligned support. Within this exploratory study, Neena functioned as a learning companion that extended access to guidance, encouraged reflective engagement, and complemented existing teaching practices. While the findings remain context-specific, they provide initial evidence that pedagogically embedded GenAI chatbots can play a meaningful role in supporting learning within complex disciplinary environments.

Limitations and future work

This study should be interpreted within the context of several limitations. First, the research was conducted within a single postgraduate unit at one Australian university. While all enrolled students participated in the study, the findings are context-specific and are not intended to be generalised to other disciplines or educational settings. Instead, the study provides an exploratory account of student experiences within a particular implementation of a pedagogically embedded GenAI chatbot. The study relied primarily on self-reported survey data, and the findings represent an early-stage evaluation of a single chatbot implementation. Future research could examine chatbot interaction logs to better understand patterns of student help-seeking and concept difficulty. Such analyses may provide educators with actionable insights into areas where

students experience challenges, informing the redesign of content, learning activities, and assessment support for subsequent cohorts. The small sample size and predominantly positive responses should also be considered when interpreting the findings, which are intended to provide exploratory insights rather than evidence of effectiveness.

Future research will extend this work through larger and more diverse implementations across multiple units and disciplinary contexts. Longitudinal studies may provide insights into how students' use of conversational AI changes over time and how such tools influence self-regulated learning, engagement, and academic success. Further investigation is also needed to explore the role of multimodal conversational agents, AI literacy, and human-AI collaboration in supporting learning within higher education.

Conclusion

This paper reports initial findings from an exploratory mixed-methods case study examining the use of a pedagogically embedded GenAI chatbot within a postgraduate unit at an Australian university. Positioned as a learning companion, Neena was designed to provide contextualised guidance, support reflection, and complement existing teaching practices through scaffolded interaction. The findings suggest that students perceived value in the chatbot as a source of immediate and contextually relevant support. Three contributions emerged from the study: the chatbot's role as a form of first-contact pedagogical support, its capacity to facilitate AI-mediated scaffolding for learning, and its complementary relationship with educator support. Students also identified opportunities for future enhancement, particularly in relation to conversational naturalness and multimodal functionality. The study contributes to emerging discussions on the pedagogical integration of GenAI in higher education. Consistent with principles of conversational pedagogy and human–AI complementarity, the findings suggest that the educational value of conversational AI lies not simply in technological capability but in how such systems are designed, embedded, and aligned with learning outcomes. In particular, the study highlights the importance of contextualised support, guided inquiry, and pedagogical guardrails in shaping meaningful learning experiences with GenAI.

As an exploratory investigation, the study provides early insights into how pedagogically embedded GenAI chatbots can support learning within higher education. Future research should examine the longer-term impact of conversational AI on engagement, self-regulated learning, and academic outcomes across diverse educational settings. As GenAI technologies continue to evolve, there is an opportunity to design learning companions that extend access to support while preserving the central role of educators in fostering critical thinking, reflection, and disciplinary understanding.

References

Abubakar, S., Jeilani, A., & Yusuf, M. (2025). The role of over-reliance on AI in the negative consequences of student learning: The moderating effects of ethical concerns and institutional policies. *Cogent Education*, *12*(1), 2591503. https://doi.org/10.1080/2331186X.2025.2591503

Ait Baha, T., El Hajji, M., Es-Saady, Y., & Fadili, H. (2024). The impact of educational chatbot on student learning experience. *Education and information technologies*, *29*(8), 10153-10176. https://doi.org/10.1007/s10639-023-12166-w

Al Issa, H.-E., & Maheshwari, G. (2025). Shaping the future of education: A cluster analysis of generative AI's transformative impact. *Interactive Technology and Smart Education*.

Alexander, R. (2018). Developing dialogic teaching: Genesis, process, trial. *Research Papers in Education*, *33*(5), 561-598. https://doi.org/10.1080/02671522.2018.1481140

Aslan, S., Alyuz, N., Li, B., Durham, L. M., Shi, M., Sharma, S., & Nachman, L. (2025). An early investigation of collaborative problem solving in conversational AI-mediated learning environments. *Computers and Education: Artificial Intelligence*, *8*, 100393. https://doi.org/10.1016/j.caeai.2025.100393

Atif, A., Jha, M., Richards, D., & Bilgin, A. A. (2021). Artificial Intelligence (AI)-enabled remote learning and teaching using pedagogical conversational agents and learning analytics. In S. Caballé, S. N. Demetriadis, E. Gómez-Sánchez, P. M. Papadopoulos, & A. Weinberger (Eds.), *Intelligent Systems and Learning Data Analytics in Online Education* (pp. 3-29). Academic Press. https://doi.org/10.1016/B978-0-12-823410-5.00013-9

Atif, A., Jha, M., Richards, D., & Cibin, A. (2025). Navigating the AI assessment horizon: A foresight-driven framework for ICT education. *ACIS 2025 Proceedings. 125*. https://aisel.aisnet.org/acis2025/125

Bettayeb, A. M., Abu Talib, M., Sobhe Altayasinah, A. Z., & Dakalbab, F. (2024). Exploring the impact of ChatGPT: Conversational AI in education. *Frontiers in Education*, *9.* https://doi.org/10.3389/feduc.2024.1379796

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE Publications.

Chang, D. H., Lin, M. P. C., Hajian, S., & Wang, Q. Q. (2023). Educational design principles of using AI chatbot that supports self-regulated learning in education: Goal setting, feedback, and personalization. *Sustainable Development of Online Learning Practices and Emerging Technologies in Education*, *15*(17). https://doi.org/10.3390/su151712921

Chia, J., & Frattarola, A. (2025). A design-based approach to analysing student engagement with a GenAI-Enabled brainstorming app. *Computers and Education: Artificial Intelligence*, *9*, 100468. https://doi.org/10.1016/j.caeai.2025.100468

Colbran, S., Jha, M., & Schiavone, C. (2026). Understanding student perspectives on generative AI chatbots: A human-centred mixed-methods study in higher education. *International Journal of Educational Technology in Higher Education*, *23*(28 (2026)), 2-21. https://doi.org/10.1186/s41239-026-00605-w

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research (3rd ed.)*. SAGE Publications.

Du, Q. (2025). How artificially intelligent conversational agents influence EFL learners' self-regulated learning and retention. *Education and Information Technologies*, *30*(5), 21635-21701. https://doi.org/10.1007/s10639-025-13602-9

Ganguly, A., Mehjabin, N., Malik, A., & Johri, A. (2025). Conversational AI agents in education: An umbrella review of current utilization, challenges, and future directions for ethical and responsible use. *AI and Ethics*, *6*(1), 72. https://doi.org/10.1007/s43681-025-00916-0

Guan, S., Wang, J., Bian, J., Zhu, B., Lou, J. G., & Xiong, H. (2026). Evaluating LLM-based agents for multi-turn conversations: A survey. *ACM Transactions on Intelligent Systems and Technology*, *17*(4), 1-40. https://doi.org/10.1145/3793671

Jeon, J., & Lee, S. (2023). Large language models in education: A focus on the complementary relationship between human teachers and ChatGPT. *Education and Information Technologies*, *28*(12), 15873-15892. https://doi.org/10.1007/s10639-023-11834-1

Ji, H., Han, I., & Ko, Y. (2023). A systematic review of conversational AI in language education: Focusing on the collaboration with human teachers. *Journal of Research on Technology in Education*, *55*(1), 48-63. https://doi.org/10.1080/15391523.2022.2142873

Koh, J., Cowling, M., Jha, M., & Sim, K. N. (2024). AI-teacher teaching task spectrum in action. In Cochrane, T., Narayan, V., Bone, E., Deneen, C., Saligari, M., Tregloan, K., Vanderburg, R.(Eds.), *Navigating the Terrain: Emerging frontiers in learning spaces, pedagogies, and technologies. Proceedings ASCILITE 2024*. Melbourne (pp. 277-286). https://doi.org/10.14742/apubs.2024.1447

Kuhail, M. A., Alturki, N., Alramlawi, S., & Alhejori, K. (2023). Interacting with educational chatbots: A systematic review. *Education and Information Technologies*, *28*(1), 973-1018. https://doi.org/10.1007/s10639-022-11177-3

Labadze, L., Grigolia, M., & Machaidze, L. (2023). Role of AI chatbots in education: Systematic literature review. *International Journal of Educational Technology in Higher Education*, *20*(1), 56. https://doi.org/10.1186/s41239-023-00426-1

Lin, M. P.-C., & Chang, D. (2023). CHAT-ACTS: A pedagogical framework for personalized chatbot to enhance active learning and self-regulated learning. *Computers and Education: Artificial Intelligence*, *5*, 100167. https://doi.org/10.1016/j.caeai.2023.100167

McTear, M. (2021). *Conversational AI: Dialogue systems, conversational agents, and chatbots*. https://link.springer.com/book/10.1007/978-3-031-02176-3

Rudolph, J., Mohamed Ismail, F., & Popenici, S. (2024). Higher education's generative artificial intelligence paradox: The meaning of chatbot mania. *Journal of University Teaching and Learning Practice*, *21*(6), 34. https://doi.org/10.53761/54fs5e77

TEQSA. (2025). *Enacting assessment reform in a time of artificial intelligence*. Retrieved 28-05-2026 from https://www.teqsa.gov.au/guides-resources/resources/corporate-publications/enacting-assessment-reform-time-artificial-intelligence

Watermeyer, R., Lanclos, D., Phipps, L., Shapiro, H., Guizzo, D., & Knight, C. (2025). Academics' weak(ening) resistance to generative AI: The cause and cost of prestige? *Postdigital Science and Education*, *7*(4), 1171-1191. https://doi.org/10.1007/s42438-024-00524-x

Webb, M., & Galamba, A. (2026). Transforming pedagogy with GenAI-supported formative assessment: Challenges for teacher education. *British Journal of Educational Technology*, *57*(3), 690-706. https://doi.org/10.1111/bjet.70051

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.

Younas, M., El-Dakhs, D. A. S., & Jiang, Y. (2025). A comprehensive systematic review of AI-driven approaches to self-directed learning. *IEEE Access IEEE Education Society Section*, *13*, 38387-38403. https://doi.org/10.1109/ACCESS.2025.3546319

Yusuf, H., Money, A., & Daylamani-Zad, D. (2025). Pedagogical AI conversational agents in higher education: A conceptual framework and survey of the state of the art. *Educational Technology Research and Development*, *73*(2), 815-874. https://doi.org/10.1007/s11423-025-10447-4

Zhan, Y., Boud, D., Dawson, P., & Yan, Z. (2025). Generative artificial intelligence as an enabler of student feedback engagement: A framework. *Higher Education Research & Development*, *44*(5), 1289-1304. https://doi.org/10.1080/07294360.2025.2476513

Zhang, R., Zou, D., & Cheng, G. (2024). A review of chatbot-assisted learning: Pedagogical approaches, implementations, factors leading to effectiveness, theories, and future directions. *Interactive Learning Environments*, *32*(8), 4529-4557. https://doi.org/10.1080/10494820.2023.2202704

Jha, M., Colbran, S. & Schiavone, C. (2026). Conversational pedagogy in practice: Exploring a unit-embedded GenAI chatbot in higher education. In Cochrane, T., Narayan, V., Poole, T., Lai, P., Lake, P., Moore, O., & Li, L. (Eds.), *The Future is Connection: Collaboration, Creativity and Compassion in a Digital Society*. Proceedings ASCILITE 2026. Brisbane (pp. 240–250). https://doi.org/10.65106/apubs.2026.3109

Note: All published papers are refereed, having undergone a double-blind peer-review process.
The author(s) assign a Creative Commons by attribution license enabling others to distribute, remix, tweak, and build upon their work, even commercially, as long as credit is given to the author(s) for the original creation.

© Jha, M., Colbran, S. & Schiavone, C. 2026