From Human Tutors to AI Chatbots: Exploring the Role of ChatGPT in Personalized Learning

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ABSTRACT

Artificial intelligence (AI) has opened new paths for personalized education, and AI chatbots are beginning to play a meaningful role in academic life. OpenAI's generative language model ChatGPT provides an alternative to human-like tutoring known as interactive, adaptive dialogue (chatbot). It has the special feature of being multilingual and providing simple information drawn from complex text. ChatGPT can consistently and accessibly, without cultural distortion, offer academic support to learners from a foreign environment, helping them understand what they are studying and giving them confidence in that material. The article concludes with an explanation of how the chatbot can be used and the key challenges in implementing the chatbot for both educators and students. The paper thus adds to the growing literature on AI in education and makes practical suggestions to institutions hoping to make intelligent digital solutions a seamless part of academic life.

Keywords: ChatGPT, Artificial Intelligence in Education, Personalized Learning, Ai Chatbot, International Students

INTRODUCTION

Higher education sectors around the world are experiencing a profound shift, as the continued blurring of digital technologies pushes for greater access, equity, and learning gains (Mohamed Hashim, Tlemsani, & Matthews, 2022). Consequently, Artificial Intelligence (AI) has emerged as a powerful force that is transforming traditional education systems. Global AI applications in education include automated grading, plagiarism detection, as well as more advanced applications such as adaptive learning systems and intelligent tutoring. These technologies are increasingly seen in the literature for their potential to tailor content and feedback to specific learners, thereby providing personalized learning opportunities.

Personalized learning is a method that focuses on adjusting teaching to match each student's unique abilities, preferences, and learning speed. It is becoming more important because a one-size-fits-all approach doesn't work well for everyone (Shemsack & Spector, 2020). However, many higher education institutions still struggle to implement personalized learning effectively due to constraints such as limited faculty time, large student populations, and uneven access to academic support (Bingham et al., 2018). These gaps have highlighted the need for scalable, responsive, and cost-effective interventions that can support continuous and individualized learning without placing extra burden on educators.

According Rumbley, Altbach, and Reisberg (2012), international students are studying at universities in every corner of the globe, leading to a more diverse marketplace in higher education. This trend, while beneficial in terms of cross-cultural exchange, represents a huge hurdle academically since many foreign students have to contend with the unfamiliarity of completely new educational systems and languages. Even though institutions of higher education would like to create working and learning environments that are welcoming and supportive, many institutions have difficulty in providing assistance to students who may be non-native speakers or new to local academic traditions.

This opens the door to ChatGPT, a new-generation AI chatbot created by OpenAI with immense potential as a more flexible tutor (Hammer, 2024). Unlike conventional systems, ChatGPT is a natural language dialogue system, which can communicate with students in natural language conversations, can be run in multiple languages, and provides personalized academic support based on dynamic interaction. As a result, it is a particularly well-situated resource for international students who may experience language barrier problems, anxiousness when communicating, or lack of academic support in their new environment. This platform provides 24/7 service, offering simplified explanations, multilingual responsive and all those make it a personal tutor for foreign learners.

The educational use of ChatGPT, while powerful, has been poorly conceptualized, particularly in relation to how it affects international student experience of learning. The existing literature has primarily investigated general functionality or institutional implementation, and there has been little attention paid to the extent to which AI chatbots can be utilized to directly fulfill cross-linguistic and intercultural learning needs (Abdaljaleel et al., 2024). The present study attempts to fill this vacuum by examining the conceptual role of ChatGPT in the role of a (multilingual) personal tutor in higher education. Its aim is to conceptualize a theory of how these types of tools can promote accessibility, comprehension, and success among international students, and by extension the student body more generally.

Problem Statement

As higher education evolves, one of the game-changing strategies teachers have implemented is the incorporation of Artificial Intelligence (AI) tools to create customized learning experiences for students. These tools are focused more on the adaptive nature of their assistance, which again is based on the context of the particular student, which helps fill the gaps in terms of engagement, understanding and learning outcomes. This is especially important in diverse teaching-learning environments where students from linguistic and cultural backgrounds learn together and confront similar learning issues.

Not only is the penetration of AI tools in Education still inconsistent, with several institutions facing the challenges of limited digital infrastructure, insufficient staff preparedness, ethical use, and data privacy issues, the local digital ecosystem in many parts of the world continues to be nascent (Dempere, Modugu, Hesham, & Ramasamy, 2023). For foreign students these challenges are all the more pronounced, as they struggle with language barriers, a new academic culture and restricted access to one-to-one help in their host countries (Abdaljaleel et al., 2024). While traditional tutoring services do provide assistance, they are not always accessible, nor are they catered for when it comes to multilingual or culturally nuanced needs.

ChatGPT can communicate in nearly all languages and provide instant, contextual feedback, making it a near-ideal personal tutor a significant advantage for international students. ChatGPT allows students to get explanations and academic help in a language they prefer, which could decrease anxiety, increase understanding, and ultimately increase academic confidence. Apart from local students benefiting during the pandemic situation, this study is also indicating that introducing ChatGPT as personal tutor chatbot as vital and essential academic tool for foreign learners.

This exploratory paper explores how ChatGPT could potentially transform conventional tutoring paradigms. Particular focus is given to how ChatGPT may aid international students' academic achievement and assimilation in an equitable manner. ChatGPT possesses the potential to supplement instructors by addressing students of various backgrounds.

LITERATURE REVIEW

AI and Personalized Learning in Higher Education

Artificial intelligence has had a big impact on higher education, especially when it comes to personalised learning(Njiku, 2020). AI-based intelligent tutoring systems and adaptive learning platforms can change the way they teach each student as they learn, giving them the right level of material and feedback. These technologies try to show us that not everyone learns the same way, and they try to fix the problems with traditional teaching methods. AI has been linked to better studying and happier students by supporting personalised learning that meets the needs of all types of learners.

Even though artificial intelligence (AI) has the potential to completely transform education, universities have been hesitant to take advantage of this potential to create individualised learning environments that are catered to the unique needs, interests, and learning styles of each student (Dempere et al., 2023). Through algorithms that can modify instruction in real-time based on a learner's progress, artificial intelligence has demonstrated its remarkable ability to personalise educational experiences at the individual level. This would enable the large-scale delivery of highly customised education. The majority of educators, however, still employ traditional teaching methods that are better suited for big classes than for one-on-one instruction. Every student may gain from a journey specially designed to bring out their best potential with automated systems that personalise the learning process (Mohamed et al., 2022). However, widespread problems like deep-rooted academic traditions, inadequate campus networks, and gaps in digital proficiency have slowed the adoption of transformative AI applications(Owoc et al., 2021). Yet, there is still a long way to go before AI can fully support self-directed learning and inspire all students to reach their full potential.

An underused region of AI in training is learning analytics, the method of assessing extensive amounts of student details from digital software programs to predict productivity and suggests specific interventions. When optimized, learning analytics can more successfully target those students likely to drop out and send them through the right services (Ifenthaler & Yau, 2020). Yet, in practice, a lot of institutions do not have the knowledge or the proper systems to interpret the data. Consequently, the insights are more like numbers with little effect and even less potential of the technology.

Chatbots in Education: A New Frontier

In recent times, AI-driven chatbots have gained impetus to bridge the need for academic support. One such innovation is ChatGPT, built by OpenAI which is among the best-known efforts in this area. Using natural language processing, it engages users through interactive dialogues providing them assistance and explanations in real-time. ChatGPT and such models used in educational places had been found to help in autonomous learning and ease access to academic help beyond the class hours (Neumann, 2023). In practice, AI chatbots have been deployed at universities to automate the answering of student questions. A teaching assistant chatbot, for instance, was able to process thousands of enquiries resulted in greater access to assistance for students (Gross, 2023). These initiatives suggest growing acceptance for chatbot technologies within academic settings.Below is the example of the chatbot created by the corresponding author.

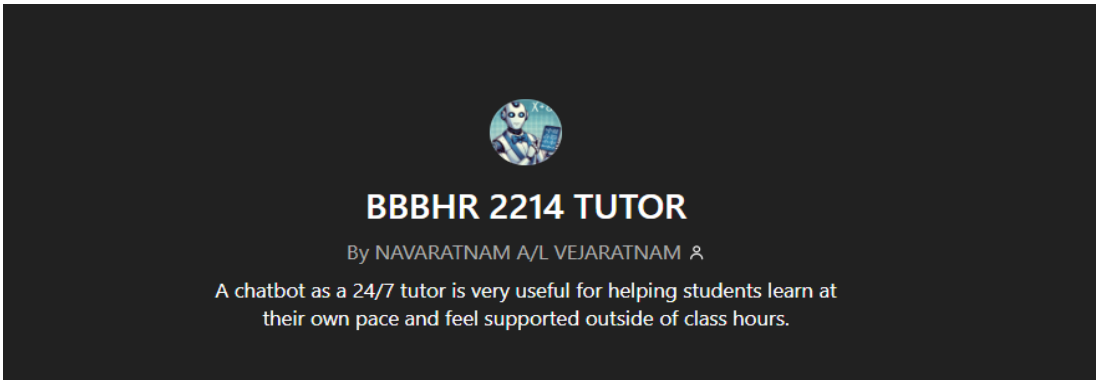

Figure 1: AI Chatbot for a Degree Program Subject

The BBBHR 2214 TUTOR chatbot, is a tutor available 24 hours a day, seven days a week, to help students from outside the class room. This AI driven tool is a great resource tools for learners needing to study at their own pace may wish to review material, practice or clarify doubting by revisiting the material at any given time. The fact that it is available all the time helps to fill the space between lectures and self-study and, in a blended and online learning area, this is crucial. In addition, having the chatbot available 24/7 to provide assistance with little to no judgment is considered an added value for international students that may have to deal with the language barrier, culture shock, or time zone changes. In nurturing inclusive and student-centered learning environments, the chatbot fills a vital gap by providing immediate/chance to learn outside school hours and constant academic support, making education more equitable and learner-centered (Luckin et al., 2016).

Topic	Explanation	Example
What is HRM	Managing people to help a company grow and succeed	Bakery hires right people, trains them, gives rewards
Recruitment	Getting many people to apply for a job	Posting job ads, asking staff to refer, joining job fairs
Selection	Picking the best candidate from those who applied	Reading resumes, interviews, tests
Orientation	Introducing new employees to the workplace	Showing the office, explaining rules and job duties

Figure 2: Snapshot of the notes

There are many advantages an AI chatbot can provide students as their learning companion. Second, it enables 24/7 access, allowing students to review course material, field doubts, and reinforce their understanding whenever they need, even when normal class hours have ended (refer to Fig. 2). It allows students to learn at their own pace and to review difficult sections until they feel confident, for instance. The users may include also international students who are not familiar with language to speak which eventually creates huge hurdle to understand the lesson and passing the assessment as well. From getting ready for an exam or interpreting assignment, the chatbot is able to assist students as seen in Figure 3. Instant feedback and explanation from the chatbot improves academic support taking the place of limited office hours, fostering self-directed learning, and boosting learners' self-efficacy (Holstein et al., 2020; Luckin et al.,2016).

Of course! Here are **5 multiple-choice quiz questions** based on **Chapter 2: Introduction to HRM**:

Quiz 1: What is the main goal of HRM?

A. To reduce the number of employees
B. To improve sales strategies
C. To manage people effectively for company success
D. To avoid paying overtime

Figure 3: Sample Quiz That Students Can Develop Using the Chatbot

It another useful feature of the AI chatbot as allows student to keep track of their attendance record, which encourages students to be responsible and disciplined as in Figure 4. The chatbot enables students to check their attendance status anytime they want, and especially they get motivated to be aware of their participation and take charge of their academic life. It is particularly beneficial for high achieving or ambitious students who have set their own attendance targets as part of their learning goals. Similarly, with real-time attendance data, students can quickly spot discrepancies early on and discuss it with instructors, if necessary. This feature

increases transparency, and provides students with an effective way to help them stay organized and complete their assignments on time during the course (Ifenthaler & Yau, 2020).

Week	Date	Attendance Status	Remarks
Week 1	2025-04-01	Present	–
Week 2	2025-04-08	Present	–
Week 3	2025-04-15	Absent	Medical certificate

Figure 4: Attendance Record for Weeks 1–3

Challenges in Implementing AI in Personalized Learning

One major barrier to effective AI integration in education is the lack of proper training for educators. Many teachers are expected to use these tools on their own, without sufficient professional support. This problem is made worse by the fact that institutions responsible for promoting AI adoption often fail to take the lead, lacking the collaboration and momentum needed to integrate AI meaningfully into classrooms. As a result, even when AI tools are available, they are often underused or used incorrectly. Without the right training, educators may struggle to interpret data, personalize content effectively, or trust the recommendations made by AI systems (Ifenthaler & Yau, 2020). This not only reduces the potential benefits of AI but also widens the gap between technology-enhanced and traditional learning environments.

Another significant concern is that students tend to use AI tools primarily for completing assignments, rather than for enhancing their overall learning process. Given easy accessibility of AI chatbots and writing tools, numerous students exploit these technologies to write essays, understand solutions to problems or even give a quiz without comprehending the topic fully. It causes superficial learning, academic dishonesty, and has a tendency to not utilize critical thinking skills. If not guided, students will see AI as a shortcut and a shortcut only instead of as an opportunity for better learning and understanding (Luckin et al., 2016).

Lastly, there are no clear institutional guidelines on how to utilize AI effectively and ethically, leaving both educators and students confused. These include AI detection tools, plagiarism risks, and data privacy, which remain unregulated or enforced loosely. Also, others are still stuck in textbook-based teaching and are unwilling to adopt new wave technologies due to "old-school" thinking. This reluctance for change has contributed to the slow pace of integration of AI in classrooms (Zawacki-Richter et al., 2019).

One of the most important—but often overlooked challenges in using AI chatbots in education is teaching students how to prompt effectively. One common mistake was that students struggled to craft clear, specific, and contextualized questions needed to get useful responses from AI systems. In the absence of these skills, the chatbot will produce irrelevant answers or superficial responses that can create frustration and low learning value. To fix this, educators must first undergo their own training on how prompting works and how to teach it effectively. In addition to creating new courses to train students on using AI tools, educators also should be trained on designing and developing new educational chatbots in line with learning objectives, course content, and student needs. This two-tiered training gives both the end and the content users the ability to harness the power of the AI tools. All this will not work unless good investments are made on skills including pedagogical and emotional skills that are needed to support meaningful learning outcomes, because there are lots of more advanced chatbots that may not support meaningful learning outcomes (Holstein et al., 2020; Zawacki-Richter et al., 2019).

LIMITATIONS OF THE STUDY & RECOMMENDATION

Firstly, in this study there was no primary data collection, so there is no real feedback from users or actual testing of ChatGPT as a personal tutor in actual classrooms. As a result, the reports and recommendations are theoretical and must be validated by research in the future. Next, this research accesses only higher education systems and

possibly does not take differences in technology access, digital skills, or others into account in different areas of or countries or aspects of the education sector. This hampers the adoption of the framework in lower resource settings or non-English speaking countries where the AI tooling might be struggling even more.Finally no proper theory or model were integrated to support the suggestion to introduce the chatbot.

Based on the limitations of this study, future research is encouraged to collect primary data through surveys or other empirical methods to support claims about the chatbot's effectiveness. At same time, a qualitative study can be conducted by interviewing international students who have been using this chatbot and able to improve their academic performance. Additionally, this chatbot exposure can be extended to school environments by providing proper training and supports for both teachers and students. It is also important for future studies to incorporate relevant models or theories in the literature to strengthen the justification for the chatbot's effectiveness.

CONCLUSION

This study explored the potential of ChatGPT as a personal tutor in higher education, focusing on its ability to support personalized learning and address existing gaps in academic support systems. Through a synthesis of recent literature and the study proposed that AI-powered chatbots, particularly ChatGPT, offer a promising solution to the limitations of traditional tutoring, including issues of scalability, accessibility, and real-time feedback.

One of the most compelling benefits of ChatGPT is that it can help many international students whose first language may not be English and who may not know how to adjust to the new study environment. In contrast to traditional tutoring models that may lack availability, or fail to accommodate specific languages or even dialects, AI chatbots can offer 24/7 accessibility with clear and simplified language. It allows them to process the course material at their own pace, gain confidence, and develop academic communication skills.

Although ethical, pedagogical, and technical issues still exist, there is considerable potential here for the application of AI chatbots in higher education in ways that will greatly benefit diverse and multilingual student populations. ChatGPT can promote equity in the global classroom and improve learning resources by providing a simple, scalable, flexible, and language-inclusive academic support modality. We need to refine these tools, develop responsible guidelines for their appropriate use, and maximize their benefits for language learners, particularly those from linguistically and culturally disadvantaged populations.

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