Chapter 9
Perceived Usability, Usefulness, and Satisfaction of Educational Virtual Assistant Chatbots:
Teachers' and Students' Perception Study

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ABSTRACT

Artificial Intelligence (AI) is changing education with tools like chatbots and virtual assistants. These tools provide personalized support and make academic tasks easier. This study examines how teachers and students view chatbot usability, usefulness, and satisfaction in different educational settings. The researcher used a quantitative survey design and collected data from 238 participants across various institutions and fields. The results are promising. About 59.2% of participants found chatbots

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easy to use. Additionally, 78.2% said these tools helped them work more efficiently, and 79% reported having positive experiences. ChatGPT and Grammarly were the most commonly used platforms. While the overall opinions were positive, the study highlights the need for organized integration, ethical guidelines, and training to improve engagement and learning results. These findings indicate that educational chatbots are not just trends; they are becoming vital parts of modern teaching, suggesting ways to create more inclusive and adaptable learning environments.

1. INTRODUCTION

In recent years, the rapid development of artificial intelligence has begun to transform not only the process of teaching and learning but also the very essence of being pedagogical or a learner. AI applications contribute largely to building flexible environments that are sensitive to the particularities of each student by considering their needs, styles, and degrees of attention. Students benefit from AI-powered chatbots in three significant areas: homework and study assistance, personalised learning experiences, and skill development. At a macro level, such systems will be able to dynamically respond to student learning by providing immediate feedback and adjustments to content when appropriate, based on individual paths discovered for all learners (Li & Wong, 2023). AI developers have actively taken the lead in changing the education landscape by continuously assessing how effective, usable, and satisfying these tools are to people who depend on them (Almufarreh, 2024). This results in more responsive digital learning environments, whereby automatic grading systems can now provide instant feedback to the student. In the process of evolution, intelligent tutors and generative and language-based AI create flexibility and dynamism in learning to suit the uniqueness of individual learners' needs (Das et al., 2024). This renaissance was reflected bibliometrically by a surge of scholarly publishing that started building momentum in 2020 and peaked three years later in 2023—a shift reflected in research involving students, machine learning, and higher education (Kavitha & Joshith, 2024).

It saves time for teachers and helps improve pedagogy. The greater the role AI plays in classrooms, the more likely it is to become a true educational shift (Zawacki-Richter et al., 2019). AI innovations such as intelligent tutoring systems and adaptive learning platforms have transformed instructional methods by automating significant administrative tasks. This global research momentum comes from traditional powerhouses China and the US and newer players like Saudi Arabia, India, and Malaysia. There has been a discernible pivot since 2022 to longitudinal studies tracing AI's evolution and its impacts, especially concerning intelligent tutoring systems, ChatGPT, and machine learning. As a result, significant efforts and resources have

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Donna Governor, David Osmond, Sanghee Choi, April Nelmsand Max Vazquez-Dominguez (2020). *Open Educational Resources (OER) Pedagogy and Practices (pp. 160-186).*

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