Chapter 7
How AI Chatbots Enhance Student Support in Higher Education:
Exploring the Opportunities and Challenges

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ABSTRACT

In recent years, higher education institutions adopt speedy adoption of Artificial Intelligence (AI) where they have developed AI-powered chatbots to optimize their student support roles. This paper demonstrated the main opportunities that provided by AI chatbots, including 24 hours a day, enhance student engagement, personalize academic support, and improve administrative efficiency. This paper provides evidence on how capabilities of AI chatbot system can impact institutions as they attempt to implement student support solutions through practical technological advice. By analyzing these opportunities and challenges, this paper provides a balance perspective and vision for institutions that aiming to adopt AI chatbots solutions for student support. This discussion recommended future developments should focus

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more on adapting the chatbot, and it also suggested future directions for research and development to explored how the ethical use in AI chatbots can be effective in higher education environments.

1. INTRODUCTION

Artificial intelligence technology is increasingly being adopted by all areas of the society including higher education institutions in higher numbers. AI-driven tools in educational organizations are considered as an essential element for improving supportive learning structures and learning experience to develop their educational projects. Therefore, AI chatbots are important tools of education, as students can be able to interact with them to get academic consultancy, quickly access to educational information, and enhance their engagement with services of education.

University life creates special problems for students, who are starting their first year of study. Many academic, social, as well as administrative changes that first-year that students face create extensive effects on their academic success and total success. According to Van Rooij et al., (2018), academic adjustment consists of four influential elements which include learning motivation, academic work application together with academic task effort, and satisfaction about academic environments. Consequently, students will face some of these difficulties and challenges with their studies because these issues can affect how their performance in classes as they start their time at university. Similarly, a study conducted by Hassan et al. (2023) found that when students feel good about themselves and can handle stress or problems, it directly impacts their academic outcome. It can be seen from these results that students' struggles and problems during their academic journey are not only reflected on their performance, but also in design of the support systems that can be implemented. Additionally, the resources of traditional academic advising and help centers are still really helpful, but they are not flexible enough to consistently meet all students' needs. AI chatbots take care these issues by providing continuous automated support all the time to answer the students' questions and suggest solutions. The continued availability of student services is still necessary as it helps students inquire more about admission, registration, as well as important deadlines for courses, as a result improve their educational activities. The customizing feature of AI chatbots uses students' profiles, observations, and what they have done to help change the way they communicate with them. These chatbots look at a student's profile and their grades and likes to give them help that matches their requirements and needs. These AI tools suggest what study materials to use and remind students when their homework is due, even suggest some activities they can join after course.