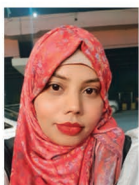




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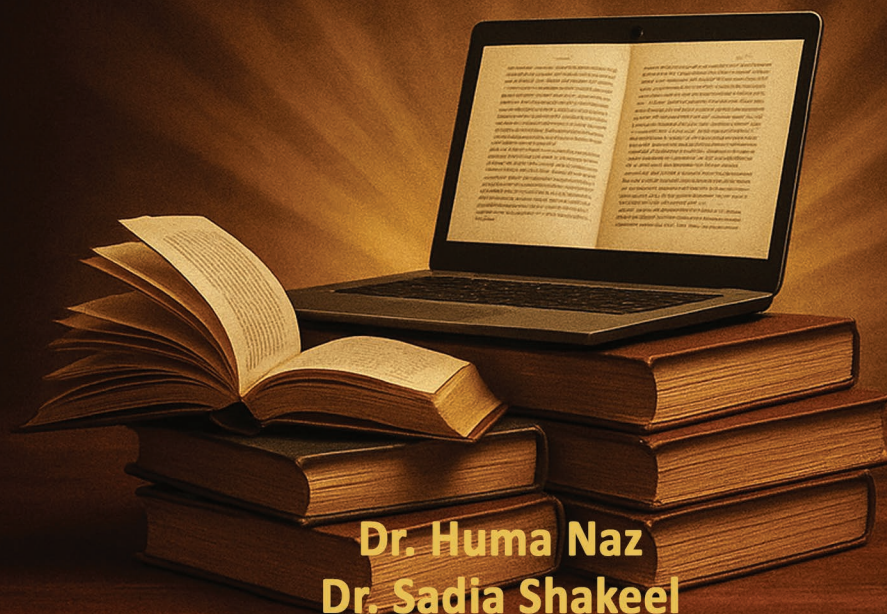


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OPEN EDUCATIONAL RESOURCES (OER): THE RISE OF FREE AND ACCESSIBLE LEARNING

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Chapter-4

The Role of AI-Powered Chatbots in Online Learning and Student Support

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Abstract: The use of AI-powered chatbots in online learning and student support has drastically changed the way of students' engagement with educational resources. These chatbots have become essential tools in modern education because of their interesting features like personalized learning, real-time feedback and assistance. The AI-chatbots help students in tutoring, provide interactive learning experiences, answer their queries. One of the greatest advantages of these AI chatbots is their 24/7 availability which improves accessibility, cuts response times, and improves overall student satisfaction. Additionally, AI chatbots can assess students' learning patterns and provide them with tailored recommendations. Regardless of their benefits, these chatbots also present several challenges such as concerns over data privacy, ethical considerations, and problems in managing complex queries. This article explores the role of AI-driven chatbots in online learning and student support, analyse their potential advantages, limitations, and suggests ethical considerations for their implementation in educational settings.

Keywords: *AI chatbots, online learning, student support, personalized education, NLP, adaptive learning.*

Introduction

Artificial intelligence (AI) has turned out to be a revolutionary force within the educational sector that is revolutionizing the delivery and experience of learning. AI-driven tools such as chatbots are increasingly being used within educational systems to enhance teaching, learning, and administrative processes (Davar et al., 2025). These tools provide personalized and real-time support to the learners by using natural language processing (NLP) and a machine learning system. As the world is shifting towards digital learning environments, the use of these emerging technologies in education has become even more prominent than ever before, particularly in addressing the challenges of scalability, accessibility, and engagement. A 2025 Mordor Intelligence report predicts that AI in education market will expand from \$6.90 billion in 2025 to \$41.01 billion by 2030 at a compound annual growth rate (CAGR) of 42.83%. The shift to online learning, which the COVID-19 pandemic accelerated, has highlighted the need for AI-powered tools to assist students and teachers in managing their tasks.

The sharp rise in online classes has pushed schools, colleges and higher educational institutions to explore new ways to keep students engaged in the learning process. Though online study is helpful, but, it usually misses the quick, face-to-face touch that an actual classroom offers (Dhawan, 2020). That gap has turned attention toward AI chatbots able to hold talk-like human and give learners round-the-clock help. Such bots answer common queries, guide users through modules, provide feedback and make the whole learning experience smooth and interactive.