

COMPARATIVE ANALYSIS OF GENERATIVE ARTIFICIAL INTELLIGENCE: EVALUATING CHATGPT AND DEEPSEEK-R1 IN EDUCATION

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ABSTRACT

Generative Artificial Intelligence (AI) chatbots, such as ChatGPT, have increasingly been adopted in educational contexts in recent years. These innovative tools can generate content and address tasks based on naturally articulated queries. They offer personalized learning experiences, provide near-real-time feedback, and foster skill development. By integrating AI technologies into educational institutions, the time-consuming and tedious tasks are achieved automatically, enabling faculty, staff, and administrators to dedicate more time to enhancing student success. Recently, DeepSeek-R1, a novel generative AI chatbot, has gained popularity due to its advanced reasoning capabilities, positioning it as a strong candidate for educational applications alongside ChatGPT. The objective of this paper is to compare the two chatbots' responses to various types of queries. Findings reveal that DeepSeek-R1 demonstrates significant reasoning abilities that are well-suited for educational purposes. The paper first examines the broader applications of AI in education and presents key features of DeepSeek-R1. Subsequently, it reports on a comparative study evaluating the performance of both chatbots. Finally, the paper also reflects on the implications of AI in education, addressing attitudes towards AI adoption and the necessary policy support.

KEYWORDS: *Generative Artificial Intelligence, Chat GPT, Deep Seek, Educational Application, Comparative Study*

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