Cognitive Revolution in Indian Education: The Role of Artificial Intelligence

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Abstract

The integration of Artificial Intelligence (AI) in Indian education is rapidly reshaping the educational landscape. This study investigates how AI can be effectively incorporated into the Indian education system to enhance personalized learning experiences for students. It also explores the key cognitive and metacognitive skills that can be fostered through AI-assisted educational platforms in India. Additionally, the research delves into how the implementation of AI-driven education tools impacts educators' roles and pedagogical approaches in the Indian context. It identifies challenges and ethical considerations related to the widespread adoption of AI in Indian classrooms and suggests ways to mitigate these issues for equitable access and positive student outcomes. Furthermore, it examines how AI-powered educational technologies can be tailored to accommodate India's diverse cultural and linguistic landscape, ensuring inclusivity and cultural sensitivity while promoting cognitive growth. Using an investigative approach, the research interviewed 100 respondents from leading Indian educational institutions that have developed AI-centric educational applications. Grounded theory analysis revealed the potential benefits of individualized learning, recommendation systems, and adaptive assessments in improving student learning and supporting educators. The study highlights the contrasting perspectives between AI-focused educational technology companies and experts in an emerging economy, showcasing AI's untapped potential that these companies can leverage. Ultimately, this research sheds light on the transformative impact of AI in Indian education, emphasizing its ability to revolutionize pedagogy and learning methods, bridging the gap between traditional education and a technology-driven educational future.

Keywords

Cognitive Revolution, Indian Education, Artificial Intelligence, Learning Enhancement, Pedagogical Transformation