The Transformative Role of Artificial Intelligence in Education Pathways to Viksit Bharat 2047

Shivaraj S. Shinde

Lecturer, Department of Computer Science, STC Arts and Commerce College Banhatti

ABSTRACT:

The integration of Artificial Intelligence (AI) is poised to fundamentally transform India's education system, making learning more personalized, effective, and universally accessible. Achieving this goal, which is crucial for realizing the vision of Viksit Bharat 2047 (Developed India 2047), requires a strategic focus on infrastructure, teacher training, and ethical guidelines.

This chapter examines the impact of AI on the transformation of educational paradigms. The influence of AI utilization in the current global educational framework and within the Indian context has been examined. The chapter also discusses the challenges and obstacles that AI in education faces, along with various measures needed to overcome them and ensure impartial and efficient implementation. This chapter also explores how the use of AI tools for academic tasks and other purposes affects students, including their perceptions of the cognitive and academic impacts and their views on using AI tools in high-stakes situations. The chapter also provides statistical information and a summary of the actions and needs for Indian educational institutes to use AI in a way that is equitable and has room to expand. Keywords: Artificial Intelligence, Viksit Bharat, Educational Paradigms, Indian Educational Platforms, Future-ready India. Introduction A new era of Artificial Intelligence (AI) has been embarked in the 21st century. This has revolutionized the way people live, work, and engage with one another in all 6 The Transformative Role of Artificial Intelligence in Education.

KEYWORDS:

Artificial Intelligence, global competitiveness, digital literacy, comprehensive growth

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Introduction:

Artificial Intelligence (AI) is transforming various aspects of life, driving technological innovation, productivity, and economic development. By automating routine tasks, AI enables individuals to focus on creative and strategic roles, fostering innovation and new job opportunities. However, AI–assisted automation has also led to workforce displacements, highlighting the need for upskilling and reskilling. AI's data–driven insights empower organizations and governments to make informed decisions in areas like public health, transportation, and education. Nevertheless, concerns around privacy, bias, and accountability must be addressed to ensure inclusive and equitable AI services.

In education, AI is expected to revolutionize global systems by 2030, providing tailored learning, increased accessibility, and administrative efficiency. India's vision for Viksit Bharat 2047 emphasizes the critical role of AI in education, aiming to provide every citizen with the knowledge, skills, and values needed for comprehensive growth and global competitiveness. The education roadmap focuses on achieving 100% literacy, promoting vocational education, and building a future–ready workforce equipped with digital literacy, coding, and emerging tech skills.

This chapter explores the transformative impact of Artificial Intelligence (AI) on education, both globally and in India. AI technologies, such as machine learning and natural language processing, are revolutionizing education by enhancing administration, personalizing learning, and improving outcomes.

Key applications include:

1. Personalized Learning: AI analyzes student data to tailor content, pace, and assessments to individual needs, providing real–time feedback and targeted interventions.
2. Teacher Empowerment: AI automates administrative tasks, freeing educators to focus on instruction, mentoring, and high–value activities.
3. Inclusive Education: Multilingual AI platforms deliver content in regional languages, bridging gaps for students in rural and underserved communities, and adapting resources for students with disabilities.
4. Skill Development: AI equips students with essential skills in coding, robotics, and data science, preparing them for future job markets.

The chapter provides statistical insights and outlines the roadmap

for scalable, unbiased AI adoption in Indian education, aiming to create a more equitable, efficient, and effective education system.

Data-Driven Education Planning and Management Policy

The integration of Artificial Intelligence (AI) in education is transforming the landscape by enhancing operational efficiency, improving learning outcomes, and streamlining administrative tasks. Here's a summary of the key points:

Key Benefits of AI in Education

Enhanced Decision-Making: AI-powered data systems provide real-time insights for informed decision-making in resource allocation and policy planning.

Improved Learning Outcomes: AI-driven solutions personalize learning experiences, automate administrative tasks, and enhance student engagement.

Increased Efficiency: AI automates routine tasks, such as grading and data management, freeing up educators to focus on high-value activities.

Growth of AI in Education Market

Current Value: The AI in the education market is valued between $4.8 billion and $5.88 billion in 2024.

Projected Growth: Expected to reach $32.27 billion by 2030, with a Compound Annual Growth Rate (CAGR) of 31.2%.

Adoption of AI in Education

Student Adoption: 92% of students are utilizing AI tools in their studies, with 88% using AI for academic assignments.

Grade Improvement: 95% of student users reported grade improvements with the use of AI tools.

Immersive Technologies: Augmented Reality (AR) and Virtual Reality (VR) are transforming the educational landscape, increasing cognitive engagement and knowledge retention.

Government Initiatives

Digital Literacy: Governments are encouraging digital literacy and the use of cutting-edge technology in national educational frameworks.

Adoption Rates: The adoption rates among important stakeholder groups reflect a positive inclination towards AI in education.

Overall, AI is revolutionizing the education sector by providing personalized learning experiences, improving operational efficiency, and

enhancing student outcomes.

Conclusion:

Viksit Bharat @2047 is not only the aim of our Hon'ble Prime Minister but it is also the genuine vision of all the Indians for their nation. The integration of Artificial Intelligence in education is revolutionizing the way we learn and teach. With its ability to personalize learning, automate administrative tasks, and provide real–time insights, AI is poised to transform the education sector. As the adoption of AI in education continues to grow, it is essential to harness its potential to improve learning outcomes, increase efficiency, and bridge educational gaps. By leveraging AI, we can create a more inclusive, effective, and sustainable education system that benefits students, educators, and administrators alike.

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