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

Hanumantha V. Ninganagowdar

Assitant Professor, Department of Computer Applications, SCMP Government First Grade College, Lokapur.

DOI: https://doi.org/10.5281/zenodo.17946695

ABSTRACT:

The Article discusses how Artificial Intelligence (AI) can revolutionize Indian education to achieve the "Viksit Bharat 2047" vision by creating personalized, accessible, and effective learning experiences. AI can help bridge the digital divide, boost administrative efficiency, and foster a skilled workforce through adaptive learning platforms and data-driven insights. However, the abstract also emphasizes the importance of addressing ethical challenges and ensuring equitable access to harness AI's potential for inclusive and transformative growth.

KEYWORDS:

Artificial Intelligence, global competitiveness, digital literacy, comprehensive growth.

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.

References:

1. Agarwal, S., Jaiswal, A., Misra, P., Sharma, R., & Mishra, O., (2024, July–August), Empowering women for Viksit Bharat 2047: Challenges, strategies, and impact. International Journal for Multidisciplinary Research, 6(4).
2. Ades, A. and M. Steedman., 1982, On the order of words. Linguistics and Philosophy 4:517–558.
3. Agre, P. E. and D. Chapman., 1987, Pengi: An implementation of a theory of activity. In Proceedings AAAl–87, 268–272.
4. Aho, A., J. Hopcroft, and J. Ullman., 1983, Data Structures and Algorithms. Reading, MA: Addison– Wesley.
5. Allen, J., 1987, Natural Language Understanding. Menlo Park, CA: Benjamin/ Cummings.
6. Allen, J., 1989, Natural language understanding. In The Handbook of Artificial Intelligence Volume IV, ed. A. Barr, P. R. Cohen, and E. A. Feigenbaum. Reading, MA: Addison–Wesley.

Funding:

This study was not funded by any grant.

Conflict of interest:

The Authors have no conflict of interest to declare that they are relevant to the content of this article.