The Role of AI (Artficial Inteligence) With Special Reference to Education Sector in India

Dr. Ashok Kumar, TGT (Commerce) DAV Inter College, Varanasi, Uttar Pradesh, Email-ID: -Ashok74755@gmail.com

Abstract

The vision of "Viksit Bharat@2047" implies the overall development of India into a developed country by the year 2047, marking its hundred years of independence, AI is the important role play for achieved this goal. The vision covers various aspects of development, including economic growth, social progress, environmental sustainability and good governance. Education thus emerges as the key element for this transformational lifecycle moment and serves as the foundation for achievement and mobility. We believe that education is the foundation of any nation's progress. We agree that by investing in education, we invest in the future of India. The proposed National Education Policy 2020 also includes a lofty goal of increasing spending on education to 6% of the Gross Domestic Product (GDP), which can only be achieved through the AI. This paper aims to discuss the measures taken and the problems faced in the educational sector of India and solution of this problem by AI. This study is focused on secondary sources i.e. journals, reports, print media, and other government websites.

Keywords: AI (artificial Intelligence), Viksit Bharat@2047, Education, NEP 2020.

INTRODUCTION

Viksit Bharat 2047 is a vision of Government of India to make India a developed country by the year 2047, when India will celebrate its 100th year of independence. The vision covers various aspects of development, including economic growth, social progress, environmental sustainability and good governance. Education is an important aspect of human life. It is a process of gaining experiences through which we can modify our behaviour and thus, most essential tools to mould our behaviours. In the process, it contributes to build a responsible citizen of the nation. Education is a human right and the key for human resource development. It is the basis of the economic and cultural development of a country. Education is essential for sustainable development, peace and stability within and with other countries.

In the realm of education, artificial intelligence (AI) is crucial. It benefits both students and teachers by offering an automated mechanism for reviewing answer sheets and robotic teaching (Malik et al., 2019). Teachers are able to assist students considerably more effectively because artificial intelligence improves the effectiveness of education on both a curricular and administrative level. Learning analytics (LA), virtual reality (VR), grading/assessments (G/A), and admissions are just a few of the amenities that artificial intelligence offers to teachers (Ahmad et al., 2022). Artificial intelligence can be divided into three paradigms: AI - directed, AI - supported, and AI - empowered. Each paradigm presents new opportunities, potentials, and difficulties for educational practices (Ouyang & Jiao., 2021). Artificial intelligence tools will enable educators in underdeveloped nations to use data to improve the equity and standing of education.

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines designed to think and act like humans. This paper examines the current state of AI in Indian education, the opportunities it offers, and the challenges that need to be addressed. The integration of Artificial Intelligence (AI) into education has the potential to bring new approaches to learning and teaching, but also poses challenges such as ethical concerns and job displacement. To address these challenges, efforts are being made to develop frameworks for the adoption of AI in education.

This study investigates the role of AI in education sector in India identifies dimensions of AI applications, explores factors influencing the adoption of AI in higher education processes, and

develops a framework for the adoption of AI applications by stakeholders in the education sector. This study is focused on secondary sources i.e. journals, reports, print media, and other government websites.

"VIKSIT BHARAT @2047" AND EDUCATIONAL CHALLENGES

India aims to excel in education on a global scale and wants to become a "Vishwa Guru Bharat," driven by a belief in the transformative potential of learning. However, achieving this vision is hindered by numerous challenges. Despite its diverse population, India faces significant obstacles on its path to becoming a developed nation.

Higher Dropout Rates

Dropout rates refer to the percentage of students who leave school before completing their education. This issue of high dropout rates in India is a significant challenge that impedes the country's efforts to ensure universal access to education and promote social and economic development.

Low Literacy Rates

The issue of low literacy rates in India is a significant challenge that hampers the country's socioeconomic development and perpetuates cycles of poverty and inequality. Despite efforts to improve literacy rates, particularly through initiatives such as the Sarva Shiksha Abhiyan (SSA) and the Right to Education (RTE) 2009 Act, several factors contribute to the persistence of low literacy rates in India. Based on data from the National Statistical Office (NSO), India's average literacy rate as of 2021 is 77.70%, at the national level, male literacy stands at 84.70% and female literacy stands at 70.30%.

Foundational Literacy and Numeracy (FLN)

Foundational literacy and numeracy (FLN) are fundamental skills that serve as the building blocks for learning and development throughout a child's life. According to the economic advisory council on foundational literacy and numeracy report, the period from 0 to 6 years, known as the foundational years, holds immense importance for every child, as opportunities lost during this time cannot be regained. However, in India, there are significant challenges associated with FLN that hinder children's educational attainment and overall well-being.

Access and Quality Education

In recent years, there has been a growing concern surrounding the dual challenge of access and quality of education in India. While significant progress has been made in expanding educational opportunities across the country, particularly in terms of increasing enrolment rates and establishing more schools, disparities persist, and the issue of quality remains a major concern. In consequence of this, a significant number of children continue to skip school or leave early, which fuels the cycles of inequality and poverty. According to the results of the National Achievement Survey, over 12% of Indian rural households lived five kilometres from the nearest secondary school. More than 12% of rural Indian households did not have access to a secondary school within five kilometres, according to the National achievement survey report. The suggestion to launch special campaigns in every university and college across India reflects a commitment to inclusivity and broad-based participation in the "Viksit Bharat @2047" initiative. By reaching out to educational institutions nationwide, the government aims to mobilise a diverse range of perspectives and voices, ensuring that youth from all walks of life have the opportunity to contribute to the national development agenda.

Girl's Education

Investing in girls' education is widely recognised as a cornerstone of national development and progress. The transformative power of education extends far beyond individual benefits, impacting economies, societies, and future generations. By ensuring equal access to quality education for girls, nations can unlock a wealth of opportunities for economic growth, social

cohesion, and gender equality. Numerous pieces of literature have shed light on the obstacles faced by girls in accessing education. Financial constraints, familial preference for male offspring's education, and the absence of functional toilet facilities are commonly identified barriers.

Suggestion with reference to major role play of AI in Indian Education scenario of 2047

AI appliances suggest that academic staff should be well trained in using AI to equip learners with the required skills to face future care challenges. Similarly, the researcher recommends highlighting ethics and humanity first when teaching AI, as it threatens humankind without these values. Furthermore, privacy and dignity should be respected and protected by regulations and international laws, as AI can be used without limitations and violate human freedom. Finally, higher education institutions should control AI, make it serve and not destroy and dehumanise humankind.

The National Education Policy 2020 makes clear that in order to meet all of these issues, us educational system still lacks the necessary capacity and needs some significant adjustment. According to the most recent data available, the gross domestic product (GDP) allotted to education in India is 2.9% as of this date. **The National Education Policy (NEP) 2020 suggests a target of 6% of GDP** to be allocated to education in India. Indeed, increasing the allocation of Gross Domestic Product (GDP) towards education from 2.9% to 6% poses a considerable challenge. Such a substantial rise in funding would demand careful planning, strategic investment, and collaboration among various stakeholders, AI is the important role play to achieved this goal.

Curriculum change: For the quality of education needs to renovation the education curriculum for increase cognitive skills like foster critical thinking, creativity, emotional intelligence, problem-solving, and lifelong learning etc. all thinks are achieved through AI.

Develop school infrastructure: School is the place where children learn, grow, and develop into responsible individuals. To ensure that students receive a holistic education, schools must provide basic facilities that cater to the overall development of a child. School highly invested to create infrastructure of AI and achieved this goal.

Improve teaching method: Teaching strategies play an important role in classroom instruction. Without the use of a strategy, teachers would be aimlessly projecting information that doesn't connect with learners or engage them. AI focusses Modern teaching on the entire learning process, rather than focusing strictly on the final result, and is dedicated to helping students build skills as part of a constructivist approach to learning. Use of Online learning, Experiential learning, Differentiation, Blended learning, Game based learning, Student-centred learning etc. is helpful for creation of appropriate teaching learning situation.

Student services and facilities: AI Support services must be provided by institutions to help students with various challenges they may encounter, whether academic or personal. These services include study skills support, mentorship programs, counselling, career guidance, financial aid, housing assistance, and student union activities, and they are offered in an organized fashion.

Use technology: Schools must use data and technology to personalise learning and remedial so that every student can progress. Currently, every class has a normal distribution of above-average, average and below-average students. But students are not numbers to be separated by scores. They are individuals who need to be guided from where they are, via their favourite path of learning, to get to their goal.
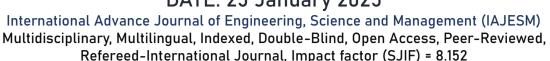
Inclusive education: Inclusive education is attempts to create a welcoming and supportive environment where every learner can thrive, participate, and contribute to the fullest extent possible. Inclusive education promotes not only academic excellence but also social inclusion, fostering a sense of belonging and equity among all students. Inclusive education in India still faces challenges, including inadequate infrastructure, insufficient trained personal and societal stigma.

Preparing professional teachers: We need to urgently empower and equip our teachers to move from lecture-based, book-based teaching that promotes rote learning to a multi-modal form of teaching that delivers better learning. Teacher has to perform multiple activities like teaching, evaluating, communicating, guiding and counselling the students, organizing co-curricular activities, participate in community programs, diagnose and remedy students' problems etc., together with activities which are intrinsic to teaching and learning. This needs perfection in academic and professional preparation of teacher and teacher educators, AI is the important role play for achieved this goal.

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Based on the findings and issues raised in this research paper, the researcher recommends that applying AI in education sector in India. However, AI appliances suggest that academic staff should be well trained in using AI to equip learners with the required skills to face future care challenges. Similarly, the researcher recommends highlighting ethics and humanity first when teaching AI, as it threatens humankind without these values. Furthermore, privacy and dignity should be respected and protected by regulations and international laws, as AI can be used without limitations and violate human freedom. Finally, education institutions should control AI, make it serve and not destroy and dehumanise humankind.

Conclusion

AI has the potential to revolutionise education sector in India by enhancing learning experiences, improving administrative efficiency, and supporting academic research. However, realising these benefits requires addressing significant challenges related to ethics, data privacy, digital divide, resistance to change, and infrastructure. By adopting a strategic approach that includes robust policy frameworks, capacity building, and collaborative efforts, India can harness the power of AI to transform its education sector in India. This paper provides a comprehensive overview of the role of AI in education sector in India, highlighting both the potential benefits and the critical challenges. Further research and practical implementations will be crucial in navigating this transformative journey.

Education is the foundation of the concept around which the answer to many problems is centred, it serves as the cornerstone around which societies construct their future and deal with urgent problems. The key factor promoting positive change and sustainable development is education, which is seen to be accountable for everything from poverty and inequality to unemployment, environmental degradation, and disparity in healthcare. Behind Prime Minister Modi's vision for a developed India (Viksit Bharat@2047) lies a fundamental principle: achieving this ambitious goal requires more than just government actions. It requires the active participation and shared responsibility of all Indian citizens. In conclusion, the vision "Viksit Bharat@2047" includes immense potential as well as challenges for the educational system, as India is on its path towards fulfilling the goals of a developed nation by the year 2047.AI is the important role play for the related goal achieved.

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