

The Relevance of the NEP 2020 Curriculum in an AI-Dominated ERA: Applicability and Adaptability

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ABSTRACT

The National Education Policy (NEP) 2020 represents a significant policy reformulation of India's education system, occurring after a 34-year interval and targeting a 21st-century educational paradigm. A core tenet of this initiative is the integration of advanced technologies, specifically Artificial Intelligence (AI), to optimize instruction and learning. This paper provides a historical overview of Indian education policy, delineating its formative phases and salient impacts. Subsequently, it examines the adaptability of the NEP 2020 curriculum in relation to the incorporation and leverage of AI within contemporary educational contexts.

Keywords: NEP-2020; UGC; AI Integration, Adaptability

INTRODUCTION

India's education policy is a dynamic entity, reflecting the nation's evolving socio-political landscape. From colonial legacies to post-independence aspirations, the journey of education policy in India has been marked by significant milestones and enduring challenges.

Colonial Era (1757-1947): Foundations Laid, Inequalities Persist:

The British colonial period saw the introduction of a formal education system in India. While the initial focus was on imparting English language and western knowledge, the system was fundamentally designed to serve administrative needs and perpetuate colonial power. The 'Wood's Despatch of 1854' marked a significant turning point, advocating for government involvement in education and the establishment of a centralized system. However, it also reinforced the social divide by creating a dual education system – one for the elite and another for the masses.

The subsequent decades saw the rise of nationalist movements that criticized the colonial education system for its elitist nature and lack of emphasis on Indian languages and culture. 'The Hunter Commission (1882-1883)' led to the expansion of primary education, but the focus remained on utilitarian education for preparing clerks and administrators.

Post-Independence (1947-Present): Building a Nation through Education:

Post-independence, India embraced education as a crucial instrument for national development and social justice. The 'University Education Commission (1948-49)' emphasized the need for a national system of education promoting democratic values and scientific temper. The 'National Education Policy (NEP) 1968' aimed to universalize primary education and introduce a common school system. However, achieving these ambitious goals proved challenging due to limited resources, bureaucratic hurdles, and the persistence of socio-economic inequalities.

The 1986 NEP: A Focus on Vocational Training and Equity:

The 1986 NEP introduced significant reforms, emphasizing vocational training, adult education, and promoting equity in access to education. It aimed to connect education with the needs of the economy and prioritize the education of girls and disadvantaged groups. The policy also recognized the importance of regional languages and promoted their use in education.

The 21st Century: Towards a Knowledge-Based Society:

The 21st century witnessed a renewed focus on technology and innovation in education. The 'National Education Policy 2020' the most recent iteration, aims to create a holistic and integrated education system that fosters critical thinking, creativity, and multidisciplinary learning. It emphasizes the importance of technology, vocational training, and lifelong learning, envisioning a 'New India' driven by a knowledge-based economy. Three years since the new National Education Policy was notified, replacing the 34-year-old education policy in the country, several initiatives have been rolled out by the Centre. Here is a status check on the top 10 initiatives proposed in the National Education Policy (NEP), 2020:

National Curriculum Framework for Foundational Stage (NCF FS):

It is the first ever integrated curriculum framework for children between ages three and eight in India. "Jadui Pitara: Learning Teaching Material" based on NCF FS was launched in February. It includes play-based learning-teaching material tailored for children between the age group of three to eight.

Vidya Pravesh:

The NCERT has developed a three-month play-based school preparation module for Class 1 named "VidyaPravesh". The module is essentially around 12 weeks of developmentally appropriate instruction for children entering Class 1 to bolster a child's pre-literacy, pre-numeracy, cognitive and social skills.

So far, 33 states and Union Territories except Sikkim, Manipur and Kerala have implemented VidyaPravesh from the year 2022-23.

PM Schools for Rising India (PM SHRI):

The prime minister released the first instalment of funds under the PM SHRI scheme on July 29. The schools under the scheme will nurture students in a way that they become engaged, productive and contributing citizens for building an equitable, inclusive and pluralistic society, as envisaged under the NEP.

Promotion of Indian languages in education:

The All India Council of Technical Education (AICTE) has permitted 49 engineering courses across 12 states in seven regional languages. An MBBS course has been started in Hindi. The Common University Entrance Test has been conducted in 13 languages while JEE-Main and NEET (UG) are conducted in 13 languages.

Textbooks are being translated into multiple Indian languages through AI-based app Anuvadini, developed by AICTE. Similarly, the NCERT is in the process of producing textbooks in 22 scheduled Indian languages to initiate teaching-learning through Indian language medium in addition to English medium in CBSE schools.

Pursuing two academic programmes simultaneously:

The University Grants Commission (UGC) notified guidelines for students to pursue two full-time academic programmes in physical mode provided that in such cases, class timings for one programme do not overlap with that of the other. It is not applicable for PhD programmes.

Engaging 'Professors of Practice' in Universities, Colleges:

Universities and higher education institutions (HEIs) can now hire distinguished experts as faculty members under a new category for which formal academic qualification and publication requirements are not mandatory. A dedicated portal for Professors of Practice has been launched by the UGC, having 6711 registered experts and 152 registered HEIs.

Four-year Undergraduate Programme (FYUP):

A total of 105 universities, including 19 central universities, have started the FYUP from the 2023 academic session. The NEP has recommended that the undergraduate degree be of either three- or four-year duration, with multiple exit options within this period, and appropriate certifications -- an undergraduate certificate after completing one year in a discipline or field, including vocational and professional areas, or an undergraduate diploma after two years of study, or a Bachelor's degree after a three-year programme.

IITs Setting Up Campuses Abroad:

The Indian Institute of Technology (IIT)-Madras is setting up a campus in Tanzania's Zanzibar that will begin its first academic session in October. IIT-Delhi has also signed an MoU with the UAE for setting up a campus in Abu Dhabi. IIT-Kharagpur is in the process of setting up a campus in Malaysia.

Foreign universities setting up campuses in India:

The guidelines for foreign universities to set up their campuses in India are in the final stages and are likely to be notified within a month. The draft guidelines were put in the public domain in January. Two Australian universities -- Wollongong and Deakin -- have already signed MoUs to set up their campuses in Gujarat's GIFT City.

Higher Education Commission of India (HECI):

The NEP proposed the idea of a single higher education regulator, which will integrate three bodies -- the UGC, AICTE and the National Council for Teacher Education (NCTE). The modalities are still being worked out and the bill is yet to be tabled in Parliament.

NEP 2020's Provisions for AI Integration:

The NEP 2020 recognizes the transformative potential of AI and incorporates several provisions to facilitate its integration into the curriculum:

Introduction of AI as a Subject: AI becomes a mandatory subject from Class VI onwards, introducing students to foundational AI concepts and skills.

In-Service Training for Teachers: Teachers are provided with in-service training to equip them with AI knowledge and skills to effectively teach the subject.

Establishment of AI Labs and Centers: Schools are encouraged to establish AI labs and centers to provide hands-on experience to students.

Collaboration with Industry Experts: The policy encourages collaborations with industry experts and research institutions to access AI expertise and resources.

Applicability of AI in Education: AI has a wide range of applications in education, aligning well with NEP 2020's goals.

Personalized Learning: AI can analyze students' learning patterns and tailor content and assessments to their individual needs.

Enhanced Assessment: AI-powered assessment tools can provide instant feedback, reduce bias, and improve the efficiency of grading.

Skill Development: AI-enabled simulators and virtual environments can offer students immersive and interactive experiences to develop practical skills.

Adaptive Learning Systems: AI can create adaptive learning systems that adjust content difficulty based on students' performance, providing a personalized learning journey.

Adaptability of the Curriculum to AI

The NEP 2020 curriculum is adaptable to the era of AI due to its:

Emphasis on Critical Thinking and Problem-Solving: AI requires students to develop critical thinking, problem-solving, and analytical skills, which are emphasized throughout the curriculum.

Integration of Technology: The curriculum encourages the use of technology in teaching and learning, creating a foundation for AI integration.

Focus on Interdisciplinary Learning: AI transcends subject boundaries, and the NEP 2020 curriculum promotes interdisciplinary learning, fostering a broader understanding of AI's implications.

Vocational Education: The policy emphasizes vocational education and training, including AI-related skills, preparing students for the job market in the AI era.

Challenges and Recommendations:

While the NEP 2020 provides a framework for AI integration, several challenges need to be addressed:

Infrastructure and Resources: Ensuring access to AI labs and resources in all schools remains a challenge, particularly in rural and underserved areas.

Teacher Training: Effective teacher training is crucial for successful AI implementation, requiring on-going professional development opportunities.

Ethical Considerations: The ethical implications of AI in education must be addressed, such as privacy concerns and the potential for bias.

To Overcome These Challenges, The Government Should:

- Firstly, there is a need to ensure that teachers are equipped with the necessary skills to integrate technology into the curriculum. This can be achieved by providing training and support to teachers to help them develop their technological skills.
- Secondly, there is a need to ensure that the curriculum is inclusive and accessible to all students. With AI becoming increasingly pervasive, there is a risk that certain groups of students may be left behind. The NEP 2020 curriculum needs to ensure that all students have equal access to technology and education.

- Thirdly, there is a need to ensure that the curriculum focuses on developing ethical and responsible AI skills. With AI becoming increasingly influential, it is crucial to ensure that students are equipped with the necessary skills to use AI responsibly. The NEP 2020 curriculum can achieve this by promoting digital literacy and ethical awareness.

CONCLUSION

The NEP 2020 curriculum provides a solid foundation for adapting education to the era of AI. By introducing AI as a subject, fostering critical thinking and interdisciplinary learning, and promoting the use of technology, the policy sets the stage for AI integration in teaching and learning. With appropriate infrastructure, teacher training, and ethical considerations, the NEP 2020 curriculum is well-aligned with the demands of the 21st-century workforce and empowers students with the skills and knowledge necessary to thrive in the AI-driven future.

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