INTEGRATION OF TECHNOLOGY IN EDUCATION IN NEP-2020

Sonali Roy Chowdhury Ghosh*

Abstract:The National Education Policy 2020 acknowledges the numerous benefits of incorporating technology into education, while also recognizing the potential risks and challenges associated with it. This article aims to provide a comprehensive analysis of how technology can be effectively leveraged in education, addressing obstacles, and expanding the reach of existing digital platforms and ICT-based educational programs to ensure inclusive and high-quality education for all. In this article, the researcher conducted a study to find the purposes that can be served by technology in the field of education and to study the recommendations made by NEP 2020 regarding the integration of technology in education. It also focuses on the challenges of implementing the recommendations of NEP 2020 with respect to the integration of technology in education. This study is descriptive in nature and relies on qualitative data analysis.

Keywords: *Technology, Digital Education, Academicians, Students, Policymakers, Creativity.*

■ Introduction:

The introduction of the National Education Policy 2020 marks a significant milestone for the country, representing the first major reform in the education sector in 34 years. NEP 2020 places a strong emphasis on the integration of technology, recognizing its pivotal role in fostering holistic development. One notable aspect of this policy is its commitment to promoting regional languages through the development of e-courses and the establishment of virtual labs. Additionally, the creation of the National Educational Technology Forum (NETF) is currently in progress, which is poised to play a crucial role in shaping the future of education in the country.

* Assistant Professor , Institute of Education , Haldia
  Email Id- sonali.rchowdhury@gmail.com

The incorporation of technology into education, with the goal of achieving 100 percent literacy, is a central theme of NEP 2020. The policy acknowledges the profound impact of technology on societal progress and underscores its potential to enhance the quality of education. To fully realize this vision, substantial efforts are required to provide support for the seamless integration of technology and to embrace the broader changes in the existing education system.

NEP 2020 is committed to ensuring the equitable use of technology by investing in the establishment of open public digital infrastructure. It also recognizes the importance of adopting emerging technologies such as 3D, simulation, robotics, and artificial intelligence (AI) in education. Furthermore, the policy promotes blended learning, combining online and hands-on experimental learning approaches. It also envisions the expansion of existing digital learning platforms to facilitate widespread access to high-quality education.

In conclusion, the National Education Policy 2020 represents a transformative initiative aimed at revitalizing the education system in India. With a strong focus on technology integration and innovation, the policy seeks to harness the potential of digital tools and emerging technologies to provide inclusive, high-quality education for all.

Information and communication technology (ICT), in particular, has gained attention from academics, students, and politicians as a result of the COVID-19 epidemic. In light of this, it would be important to critically evaluate the ET adoption provisions in the Indian National Education Policy (NEP) 2020 to improve its clarity and provide a roadmap for Indian education in the next decades. Hence, Technological Integration in Education: NEP 2020 is the issue which arises here.

■ Significance of the Study:

From the dawn of time, man has relied on technology to make life easier, and his goal has been to continually complicate technology. Modern cutting-edge technology has benefited human existence in every area, including schooling. Future education will undergo a radical shift in which technology will play a more significant role than it does at the now. Several studies have supported the use of technology in education, claiming that it will help students learn on their own, engage with others, continually improve what they know, and stimulate creativity. The New Education Policy made a case for the use of technology in the classroom. Nonetheless, there have been significant difficulties in putting the NEP 2020's ideas for integrating technology into education

into practice. The current study is relevant enough for all academics, researchers, and decision-makers in this area.

■ Objectives:

The main objectives of the study are as follows-

- ➤ To study the purposes that can be served by technology in the field of Education
- ➤ To study the recommendations made by NEP 2020 regarding the integration of technology in education.
- ➤ To discuss the challenges for implementation of the recommendations of NEP 2020 in respect of the integration of technology in Education.

■ Purposes Of Technologies:

Technology alone may not revolutionize education, but a transformed educational approach can benefit significantly from technology. Different perspectives on education's challenges offer various technological solutions. In sectors like IT, manufacturing, warehousing, marketing, logistics, finance, and human resource development, interactions with technology are common. Advanced media applications and accessible consumer gadgets, particularly cameras and audio-visual equipment, have contributed to the widespread adoption of information and communication technology.

Explorations into the impact of technology on education have been well-documented in industrialized cultures, even when affordability is not the primary criterion. Recently, the following technologies have been on the wish list:

Support for teachers and teaching-learning: This includes enhanced collaboration, student-teacher engagement, parent-teacher communication, improved access to open educational resources, and devices to aid various aspects of teaching and learning. System-wide support encompasses big data analytics, language acquisition, and skill development. Each of these options has been tested in various educational settings with students of different ages, and the results have been extensively documented. Each tool, product, or service has a specific function suitable for instructional use. Some, like e-learning, have become the preferred technology in education.

Cost and reliability are influenced by the complexity of arrangements, unique devices, niche markets, and technology lifespan. Consequently, they are often overlooked in public education systems. In fact, to reduce costs and reach end-users directly, many of these technologies have been positioned as consumer applications

and gadgets in the technology sector.

It's important to note that technologies have rarely evolved in direct response to educational needs. However, a wish list of potential uses can be derived from their diverse applications across various industries and sectors, including general administration and management from individual schools to state education systems, teacher and staff capabilities at all levels, and the teaching-learning processes.

Broadly, technology support is sought to serve the following purposes in order of priority:

• Data and Information Management System
• Continuous Professional Development System
• Curricular Support System

■ **Continuous Support to Schools, Teachers and Other System Functionaries Through Technology& Professionally**:

There is a possibility of professional isolation for teachers, especially those who work in tiny towns and villages. The Department of Education often offers training programmers, but not all teachers get them frequently enough to support them throughout their careers. Professional assistance is also beneficial for the administrative and academic roles within the school system. Teachers and staff from the state 's extensive private school system is likewise not included in the training intervention net. All functionaries will need a broad range of specialized training and up- grading to use the planned set of technological applications. Technology can significantly contribute to delivering the continuing assistance that is much required. Online course platforms, online interactive forums, and digital libraries may be used to meet a range of demands for instructors and school administrators since they are an accessible and affordable medium. Throughout the state, subject teacher forums have been tried out and have shown to be useful and appealing. The initiative that instructors have shown in improving themselves may be used, and the peer group that is enabled by technology can develop into very useful Communities of Practice.

■ **Recommendations of NEP-2020:**

They include research, de-skilling, and awareness raising in order to help our educational system deal with the rapid and disruptive changes that put us all, individually and collectively, at risk in an increasingly cutthroat global marketplace. The main goals of technological interventions will be to enhance educational access, support

teacher preparation and professional development, and improve teaching- learning and evaluation processes. They will also aim to streamline educational planning, management, and administration, including procedures for admission, attendance, assessment, etc. The National Educational Technology Forum (NETF), which will be the vehicle for integrating technology into many elements of school education and higher education, will be created autonomously by NEP, 2020 in order to accomplish these goals. The NETF's responsibilities will include the following: I advising Central and State Government agencies on technology-based interventions based on independent, evidence-based advice; ii) developing institutional and intellectual capacities in educational technology; iii) conceiving of strategic thrust areas in this area; and iv) articulating new directions for research and innovation. Moreover, it discusses enhancing CIET to advance and broaden DIKSHA and other educational technology efforts. Moreover, the NEP, 2020 has suggested the crucial actions below: I to carry out a number of pilot studies for online education, ii) to invest in developing digital infrastructure, iii) to promote appropriate online teaching-learning platforms, iv) to create e-Contents, digital repositories, and their reliable dissemination, v) to focus on addressing the country's digital divide, vi) to use technology to create virtual labs for easy and equal access to all students, vii) to train teachers and to incentivize their digital

■ Challenges For Implementation:

Certainly, the National Education Policy (NEP) 2020 has made commendable strides in integrating technology into education. However, there are significant challenges that must be addressed to successfully implement the policy. A survey on 'Household Social Consumption: Education' conducted from July 2017 to June 2018, covering both rural and urban households, sheds light on some critical issues:

Digital Divide: Access to technology is a fundamental concern. To effectively integrate technology into education, it is crucial for all students to have access to devices like smartphones and computers with internet connectivity. Unfortunately, underprivileged students often lack such access, creating a significant hurdle to overcome.

Infrastructure Challenges: Network issues and power cuts are prevalent in various parts of the country, especially in rural areas. Ensuring a stable and reliable digital infrastructure is essential for seamless technology integration.

Ethical Concerns: Controlling unethical practices in the digital realm, such as cheating and plagiarism, poses a challenge that must be addressed to maintain academic integrity.

Shift in Learning Paradigm: Transitioning from a traditional rote-learning system to a technology-driven model that emphasizes critical thinking and experimental learning necessitates a change in the attitudes of various stakeholders. Continuous efforts are required to understand and implement this new vision effectively.

Teacher Competence: To meet the demands of the evolving educational landscape, there is a pressing need for digitally competent teachers. Teachers should be well-versed in using technology for teaching and learning.

Digital Resources: Many subjects face limitations when it comes to teaching through digital means. Developing comprehensive digital resources for all subjects is a challenge that must be addressed.

Collaboration Between Center and States: The successful implementation of the policy requires collaboration between the central and state governments. Coordinated efforts are essential for overcoming the challenges associated with policy implementation and technology integration.

Despite these challenges, NEP 2020 represents a comprehensive education policy that has the potential to bring about significant positive transformations in the current education system. Key initiatives recommended by NEP 2020, such as conducting pilot studies for online learning, investing in digital infrastructure, and promoting suitable online teaching-learning platforms, are essential steps in realizing the policy's goals.

In conclusion, while technology integration in education is crucial for progress, addressing the digital divide, infrastructure issues, ethical concerns, and shifting the learning paradigm requires a concerted effort from all stakeholders, including governments, educational institutions, teachers, and students, to fully leverage the benefits of NEP 2020. Technology integration in education refers to the use of technology to enhance the learning experience of students. Using a variety of technologies in the classroom, including virtual classrooms, creates students who are actively engaged with learning objectives.

■ **Conclusion:**

The National Education Policy (NEP) 2020 presents innovative concepts and acknowledges the crucial role of technology in advancing education, particularly in enhancing teaching and learning. While some states have already implemented the new policy, others are in the process of doing so, highlighting that there is still a considerable

journey ahead to fully realize its objectives. One of the noteworthy strengths of NEP 2020 is its emphasis on fostering collaboration and cooperation between the central and state governments. NEP 2020 recognizes that various advances in technology such as educational software, artificial intelligence, blockchain, adaptive computer testing, etc. will play an important role in changing what and how students learn in schools. This collaborative approach has the potential to equip learners with the essential skills and technological competencies required for the future, ensuring that education remains relevant in an ever-changing world. Technology offers teachers new ways to tailor instruction to meet the needs of individual students. Adaptive learning software can adjust the difficulty of content based on a student's progress, while data analytics tools can help identify students who may need additional support.

Furthermore, the government has taken proactive measures to engage stakeholders and acquaint them with the vision and mission of the National Education Policy 2020. This proactive engagement has sparked significant interest and participation among various stakeholders, including educators, administrators, parents, and students, contributing to a shared understanding of the policy's goals and principles. In conclusion, while NEP 2020 represents a significant leap forward in reshaping India's education system, its successful implementation will hinge on continued collaboration, effective communication, and concerted efforts from both central and state authorities, as well as all stakeholders involved in the education sector.

■ **Reference:**

•Aithal, P. S.; Aithal, Shubhrajyotsna (2019), Analysis of Higher Education in Indian National Education Policy Proposal 2019 and Its Implementation Challenges‖. International Journal of Applied Engineering and Management Letters. 3 (2): 1–35. SSRN 3417517s

•Chopra, Ritika (2020)-Explained-reading the New Educational Policy 2020.The Indian Express, Daily-2nd Aug. 2020.

•Jebaraj, Priscilla (2 August 2020). ―The Hindu Explains, What has the National Education Policy 2020 proposed? The Hindu. ISSN 0971-751X

•Krishna, Atul (29th July 2020)- NEP 2020 Highlights : School and higher Education. NDTV Discussion.

•National Knowledge Commission,(2006) Report to the Nation, 2006.

•National Education Policy 2020, Ministry Of Humam Resource Development, Govt. of India.

•Nandini, ed. (29th July 2020)-New Education Policy 2020 Highlights. School and Higher Education to see major changes. Hindustan Times.

•Rohatgi, Anubha, ed. (7 August 2020). —Highlights, NEP will play role in reducing gap between research and education in India: PM Modi, Hindustan Times.