

Integration of ICT: A Study of the National Education Policy 2020 from the Perspective of Education and Teachers

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Abstract

In the 21st century, educational institutions are adapting to new sociocultural, fiscal, and digital demands, schools are on the front lines of change. As a result of these shifts and due to covid 19 Pandemic situation, the need for teachers to adapt ICT-integrated skills and techniques for more effective knowledge creation and dissemination is changing. Considering recent policy changes in education, ICT-enabled classrooms have re-emerged as one of the most cost-effective and flexible ways to learn new skills. Children are the future of the country, and they must be equipped with all the necessary skills needed to face upcoming challenges.

This paper focuses on the NEP 2020 and its recommendations for ICT integration in education and the capacity building of teachers. The National Education Policy – 2020 proposed by the Ministry of Human Resource Development (MHRD) is a milestone policy that will reshape India's long-standing educational system. It wraps up by laying out some of the remaining challenges that educators face.

Keywords: *Integration of ICT, National Education Policy 2020, Education and Teachers*



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Introduction

Today, ICT has a huge impact on every aspect of life. In the field of education, where teachers can adapt their teaching methods to meet individual needs, the effects are more noticeable. Teachers who teach their students yesterday's skills and obsolete technologies are failing to prepare their students for the world of tomorrow. But integrating ICT into education requires significant ICT capabilities. As a result, developing ICT capacity is a critical component that must be included in various ICT policies to inform stakeholders. ICT

capabilities must be designed, attained, and updated from time to time, as stated in different policies led by the Govt. Educational technology in education helps to develop a collaborative, communicative and Virtual Learning environment with the use of technology. (Juneja K.,2021) In the twenty-first-century education system, where people must constantly adapt to rapidly changing circumstances, rote learning is no longer necessary. Alka Singh (2019) in her article presents a picture of how ICTs have evolved as an outcome of globalization and technological changes on the national and international stage. To keep up with the current globalisation trend, we must constantly improve our abilities. The National Education Policy – 2020, if implemented correctly, has the potential to transform the Indian educational system and bring about significant changes.

Objectives of the study

Considering these, the goals of the present study are:

- To understand the requirements and relevance of ICT integration in the Indian Education system.
- To understand the major recommendations of NEP 2020 regarding ICT integration in education.
- To investigate some challenges faced by educators in ICT integration.

Teacher education is essential for creating a group of educators who will shape the next generation of educators. Teacher preparation is a multidisciplinary activity that requires the formation of attitudes and values, as well as the development of practice under the guidance of highly qualified mentors. Teachers must be well-versed in Indian values, knowledge, ethos, and traditions, as well as current pedagogical and technological trends.

ICT

ICT is the abbreviation for "Information and Communication Technologies." The term information and communication technologies encompass all technologies for the manipulation and transmission of information. ICT considers all existing applications of digital technology to assist individuals, enterprises, and organizations. It is difficult to define ICT because it is difficult to keep up with the changes, they happen so fast. ICT is concerned with the storage, retrieval, manipulation, transmission, or receipt of digital data.

ICT Integration

ICT integration is the incorporation of technology to support and enhance the student's performance. It means taking the help of ICT into all facets of education and training. The purpose of integrating ICT is to improve and increase the quality, accessibility, and cost

efficiency of education while taking advantage of the benefits of networking learning communities together to equip them to face the challenges of global competition.

Key challenges in integrating ICTs in education.

Infrastructure - The implementation of Technology is hampered by a lack of power, a lack of staff to manage computer labs, and a lack of facilities.

Finances - The biggest challenges are a lack of funds or improper distribution of funds to buy the most up-to-date technological devices.

Lack of trained instructors – Inexperienced teachers who do not understand the fundamentals of how to operate ICT devices or how to assist students in utilizing readily available software.

Mental Obstacles – Both students and teachers can experience mental barriers when trying to use ICT devices because they perceive them to be intricate and challenging. (Kumar et al., 2019.)

National Education Policy 2020: New era of Indian Education

The National Education Policy – 2020 proposed by the Ministry of Human Resource Development (MHRD) is a milestone policy that will reshape India's long-standing educational system. This is the third revision of the Indian Education Policy. NEP 2020 proposes several educational reforms in our country. It has focused on various aspects of teaching and learning with the integration of Information and communication technology. The policy emphasises the importance of promoting online and digital education across the country. In terms of making online teaching learning more convenient and encouraging the new education policy has shown a lot of promises and commitment. It will bring holistic reforms in the education sector. The guidelines for ensuring quality education have been carefully crafted by the Government of India. They have recognised that investing in cutting-edge education disruptive tools such as online assessments, e-learning, and choice-based education systems will undoubtedly be game changers for schools, HEIs, and universities. (Chakraborty B.,2022)

Major Recommendations

National Educational Technology Forum (NETF)

The National Educational Technology Forum (NETF), an autonomous body, will be established to provide a forum for the free exchange of ideas on the use of technology to improve learning, assessment, planning, administration, and other aspects of education at both the secondary and postsecondary levels. The goal of the NETF is to make decision-making on technology induction, deployment, and use easier by providing the most up-to-date knowledge

and research to educational leaders, state and federal governments, and other stakeholders, as well as the opportunity to consult and share the best practices. (Government of India, 2019)

The main duties of NEFT are independent, evidence-based recommendations on technology-based interventions to increase institutional and intellectual capacities in educational technology to Central and State Government organizations, to envision strategic thrust areas in this domain, and to articulate new research and innovation directions. The NETF will keep a regular inflow of authentic data from many sources, including educational technology innovators and practitioners, and will work with a diverse group of researchers to analyze the data in order to stay pertinent in the quickly evolving field of educational technology.

Disruptive Technologies

Nearly every aspect of our daily existence has changed as a result of disruptive modern technologies. Education is not an exception to this rule. The most promising disruptive innovations such as Augmented Reality (AR) or Artificial Intelligence (AI) are not mainstream yet, but they'll change the very fabric of education sooner or later. Disruptive technology has already transformed the way how educational organizations provide their services. Online learning offers new opportunities both for students and educators. This disruptive technology can include individuals who lack access to conventional forms of education for various reasons. The NETF will classify these technologies and present this analysis to the Ministry of Education, (Government of India), which will then determine which technologies require a response from the education system. Then the National Research Foundation (NRF) will conduct or expand research on it. (Alam, A., & Azad, M. 2021).

Launch of New Educational software (DIKSHA/SWAYAM)

Technology-based education platforms, such as DIKSHA/SWAYAM, will be better integrated across the school and higher education and will include reviews by users, to enable content developers to create user-friendly and qualitative content. All States, as well as the NCERT, CIET, CBSE, NIOS, and other institutions, will continue to develop e-content for teaching and learning in all regional languages. Suitable equipment will be made available to teachers so that teachers can suitably integrate e-contents into teaching-learning practices.

Virtual Labs

National Education Policy 2020 also gives emphasis to the establishment of virtual labs. SWAYAM, SWAYAMPRAKASH, and DIKSHA will be asked to create virtual labs where students can put their theoretical knowledge into practice. These labs will be used with the goal of promoting digital inclusion in society. This will foster an inclusive culture and promote

equal opportunities among learners at their leisure. These labs will be outfitted with all the necessary tools to enhance hands-on experiment-based learning. Aside from that, students and teachers will have access to a tablet or other electronic device through which they can learn. This will undoubtedly improve their learning efficiency and productivity. (Chaurasia P. 2020)

Pilot studies for online education

The NETF, CIET, NIOS, IGNOU, IITs, and NITs, among other suitable institutions, will carry out pilot studies for online education, in parallel, to evaluate the benefits of integrating education with online education while mitigating the downsides and to study related fields, like student gadget addiction, the most popular e-content formats, etc. The outcomes of these pilot studies will be made available to the public and applied to ongoing development.

Digital infrastructure

There is a need to invest in the creation of open, interoperable, evolvable, public digital infrastructure in the education sector that can be used by multiple platforms and point solutions, to address the size, variety, intricacy, and device penetration of India. This will guarantee that despite the fast advancements in technology, technology-based solutions do not become obsolete.

Digital content creation, preservation, and distribution

A digital repository of content will be developed, including coursework creation, Learning Games and Simulations, Augmented Reality, and Virtual Reality, as well as a clear public system for user ratings on effectiveness and quality. Fun-based learning will also involve the creation of student-appropriate tools, such as apps and gamification of Indian art and culture, in multiple languages and with explicit operating instructions. Students will have access to a dependable fallback mechanism for the distribution of digital content.

Bridging the digital divide

Provided that a significant portion of the population still has limited digital access, existing mass media such as television, radio, and community radio will be heavily used for telecasting and broadcasts. Such educational programmes will be made available in a variety of languages around the clock to meet the diverse needs of the student population. A special emphasis on content in all Indian languages will be emphasised and required; digital content must reach teachers and students as far as possible in their medium of instruction.

Teacher training and incentives

Teachers will receive extensive training in learner-centric pedagogy as well as how to use online teaching platforms and tools to become high-quality online content creators. The

teacher's role in facilitating active student engagement with the content and with one another will be highlighted.

Online assessment

Appropriate bodies will design and implement assessment frameworks that include the design of competencies, portfolios, rubrics, standardised assessments, and assessment analytics, such as the proposed National Assessment Centre or PARAKH, School Boards, NTA, and other identified bodies. Studies will be conducted to test new ways of assessing 21st-century skills using educational technologies.

Blended learning

While digital education and learning are promoted, the value of face-to-face learning is fully acknowledged. Consequently, many successfully integrated learning models will be identified for replication in a variety of disciplines.

Conclusion

The National Education Policy 2020 is the most important education policy of the twentieth century, and such a comprehensive national policy has been drafted in the country after thirty-four years. The policy recognised the role of technology as well as the nature of education in meeting the current societal needs and necessities of the country. It thoroughly discussed all aspects of using technology to provide universal access to high-quality education in K-12 and higher education institutions. The policy also recognises the importance of technology in promoting interdisciplinary research and innovation, as well as improving learning, assessment, planning, and administration of education.

But technology alone will not bring about the educational reforms that are envisioned in National Education policy 2020. It is important to translate an envisioned policy into implementation in a timely phased manner and conduct strategic planning with the participation of administrators, educators, and researchers. Upgrading the infrastructure is also critical to ensuring the success of the project. Putting acquired training skills into practice prevents it from becoming obsolete.

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