

Role of educational technology in the implementation of NEP 2020 in physical education

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ABSTRACT

The National Education Policy (NEP) is a significant educational development that India has been anxiously anticipating. The National Education Policy (NEP) 2020 is a significant milestone in modern education policy as it supersedes the National Policy on Education (NPE) of 1986. The implementation of this initiative results in significant transformations within the school system, as well as in the field of teacher education. One notable transformation is to the restructuring of the school system, which is accompanied by a corresponding alteration in teacher education. The phenomenon of convergence may give rise to certain challenges that need a more scholarly approach in addressing them. Over the last decade, the use of educational technology in training and teaching techniques has significantly transformed the field of sports training and physical education. The present state of our education system necessitates the use and improvement of educational technology in order to effectively execute the NEP of 2020. The policy guidelines of the NEP provide a comprehensive roadmap for its implementation. However, it is important to note that the policy also presents inherent obstacles, although without expressly articulating them. This study examines many elements that influence the adoption of an application, including information and communication technologies (ICT) difficulties, scalability, the transition from conventional to digital classroom delivery, the effect on pedagogy, and obstacles encountered during the early phases of development. This paper examines the challenges posed by global technological trends and their implications for the education system, particularly in relation to the implementation of the NEP. The successful achievement of accessibility and equity, which are crucial for reaching millions of Indians, hinges upon effectively addressing the challenges discussed herein.

Keywords: Teacher-education, Educational technology, Physical education and sports, New education policy.

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INTRODUCTION

The Union Cabinet of India approved the National Education Policy (NEP) on July 28, 2020. The Indian government finally set out 34 years later to collect feedback from more than 200,000 rural stakeholders. During the course of more than 4 years, and with the help of several seminars and debates, input was gathered for two national parliamentary-level committees. The NEP 2020, which supersedes the NPE 1986, is a significant turning point in the history of education. These policy's guiding principles are: access, equity, quality, affordability, and accountability. The assertion that was previously discussed is related to the 2030 Agenda for Sustainable Development. It aims to enhance the comprehensive, flexible, and interdisciplinary nature of school and college education in order to develop the nation into a knowledge-based society and a worldwide powerhouse. Using the unique skills that each student possesses. The goal of this educational strategy is to fulfill the requirements of the contemporary world. With this goal of ensuring that everyone has access to education, the National Education Policy of 2020 is expected to significantly alter the Indian educational landscape.¹

The primary proposal put out by the NEP 2020 is

- Students' innovativeness, originality, and cleverness will be fostered by the multidisciplinary system, which allows them to choose subjects from the humanities, science, and commerce streams.
- The development of skills is prioritized by the policy,

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especially in life skills and vocational crafts training.

- The ability to select a flexible learning path. All topics are given equal weight, allowing students to select courses based on their interests and aptitudes.
- A comprehensive and equitable educational system by 2030.
- Board examinations to assess fundamental ideas and knowledge application.
- Each student will graduate from school proficient in a minimum of one skill.
- Common learning standards in both public and private schools.

Enhancing the quality of education is a top priority for India's National Education Policy 2020, as it is critical to the nation's progress. The New Education Policy seeks to make

positive changes to the current educational system. The product offers a variety of original and contemporary ideas. A thorough, consistent, and attractive educational approach is what the policy aims to achieve. Both formal and informal educational paradigms are intended to be included in the 2020 National Education Policy. In an official educational context, students primarily learn through the guidance of their teachers and the use of instructional resources like textbooks.²

The policy encourages learning outside conventional classrooms, promoting hands-on activities and introducing multilingual to students. This approach promotes modern subjects like machine learning and artificial intelligence, fostering student interaction. The policy also divides education into academic, vocational, humanities, arts, and sciences, promoting a paradigm shift from a teacher-centered approach to a more inclusive educational system.^{1,3}

The Major Change as per NEP 2020 is a Multidisciplinary Approach

The policy aims to provide a comprehensive, multidisciplinary education in higher education institutions, encompassing subjects such as science, arts, humanities, mathematics, and professional fields. This comprehensive curriculum encourages students to develop 21st century skills and knowledge across various disciplines. Students can choose to finish their coursework in three or 4 years, with the option to earn a certificate, diploma, or bachelor's degree. Academic credits earned from recognized institutions will be digitally stored in an academic bank of credit (ABC), facilitating degree recognition and transfer. Multidisciplinary Education and Research Institutions (MERU) are proposed to achieve excellence in multidisciplinary education across India.^{1,4}

Need of IT & ICT for Implementation of NEP 2020

ICT, or Information and Communications Technology, encompasses various technical instruments and resources used in communication technology. These instruments, including computer systems, software programs, and networking components, enhance accessibility, educational value, and real-world applications.⁵ ICT enhances communication, enabling users to establish connections and engage through the global community, thereby optimizing information dissemination. ICT enhances mental activity and performance in sports by integrating physical and mental activity. Players can access training data, predict performance, and evaluate their performance using accessible software and apps. In order to improve interdisciplinary learning and address pedagogical issues, the NEP 2020 places a strong emphasis on the integration of ICT and IT in education.^{1,6}

Educational Technology as a Support System in Teacher Education

Traditional training methods in physical education have had a profound effect on sports training due to technological advancements. These advancements have allowed for

more modern approaches, enabling trainers and coaches to develop innovative, effective training programs.⁷ This has led to a significant increase in performance levels in sports and physical education.

Physical education and sports sciences require critical components for teachers to effectively support their teaching. These components include rules, procedures, theoretical frameworks, and an organized curriculum. Teachers need to understand their profession and develop the necessary knowledge, skills, and dispositions to effectively teach and support students in becoming responsible citizens.^{1,8}

Extending Teacher Professional Development through the use of Instructional Technologies

NEP and SWAYAM are key tools in the education system for enhancing online education.⁹ These platforms help teachers develop pedagogical strategies and address issues like connectivity, equipment, maintenance, and safety. They also facilitate knowledge sharing among educators.^{10,11} The NEP promotes active learning through project-based activities, addressing challenges and opportunities in traditional lecture-based teaching. These techniques can be put into practice to improve education and transform the system. Therefore, educational institutions need to assess obstacles and implement NEP effectively.^{1,12,13}

CONCLUSION

A progressive agenda, the NEP 2020 pursues to advance education grounded in scientific principles and values. The proposed shift aims to replace the outdated and inflexible 'curriculum' system, which is resistant to modification owing to the cumbersome bureaucratic procedures involved in making changes, with a more adaptable and responsive alternative. NEP of 2020 places significant importance on the development of a comprehensive, adaptable, and contemporary education structure in line through the requirements of 21st century learning. Nevertheless, to achieve these objectives, it is imperative that we consistently address and surmount the many obstacles associated with implementation over an extended period. To effectively implement the National Education Policy 2020, it is imperative towards ensure widespread internet access and the presence of well-trained educators proficient in digitalization and educational technology. These factors are crucial for the successful transition from traditional classroom teaching to a holistic approach, which is a key aspect of contemporary educational policies. The contemporary process of digital transformation in educational delivery is anticipated to have a significant influence on pedagogical practices, presenting obstacles akin to those encountered during the first phases of developmental concerns, among other factors. The obstacles that come with education include things like landscape, equity, accessibility, quality framework, and affordability for taxpayers and the government when it comes to building schools. On the other hand, utilizing

information and communication technology (ICT) can be a useful strategy for putting these ideas into practice at many levels. The use of e-learning has emerged as a prominent approach, particularly in light of the global pandemic. In order to achieve this goal, a variety of digital infrastructure elements are needed, including virtual and augmented reality classrooms, expert-driven online learning models, technologies to overcome the limitations of physical classroom and laboratory infrastructure, career counseling services, standardized evaluation programs across schools, and teacher preparation programs that prioritize learning new technology. The next decade will persistently provide a significant challenge in this regard.

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PEER-REVIEWED CERTIFICATION

During the review of this manuscript, a double-blind peer-review policy has been followed. The author(s) of this manuscript received review comments from a minimum of two peer-reviewers. Author(s) submitted revised manuscript as per the comments of the assigned reviewers. On the basis of revision(s) done by the author(s) and compliance to the Reviewers' comments on the manuscript, Editor(s) has approved the revised manuscript for final publication.