



Integrating Technology for Quality Teacher Education

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ABSTRACT

The digital India drive is an effort by the Indian Government to digitally empower Indian citizens across the country. This move helps in transforming the entire nation into a digitally empowered society and knowledge economy. Education has a major role to play in the transformation. The world of computers, internet, audio-video media etc. have brought in new opportunities in the field of education. The author made an effort through this paper to throw light on the various provisions that NEP 2020 has highlighted in its policy to integrate technology in Teacher education programs.

KEYWORDS: Digital India, Global standards, Teacher Education, Integrating Technology in Education, Challenges

INTRODUCTION

The world is developing at a rapid rate in all spheres in general, and knowledge sector in particular. For any country to progress, it becomes important to be at par with the global standards. India has witnessed changes in its Education System in the past. To bridge the gap and meet the global standards in the Education sector, India yet again introduced the New Education Policy, 2020 which is likely to bring forth major reforms in School Education, Higher Education and Teacher Education.

NEP 2020 is the first of its kind to be implemented in the modern era, chaired by an eminent scientist Krishnaswamy Kasturirangan including ten other members in the committee, to revise and revamp all the aspects of Indian Education System and create such a system that would align with the Sustainable Development Goal 4.

The Kothari Commission (1964-66) has aptly stated, "the destiny of India is being shaped in her classrooms." Teachers play a significant role in nation building. Paramount importance needs to be given to Teacher Education and the quality of teachers being created as they in turn would be responsible for shaping the future generation. C.S. Lewis rightly quoted, "The task of the modern educator is not to cut down jungles but to irrigate deserts."

The New Education Policy 2020 focusses towards attaining a holistic, multidisciplinary, flexible, innovative, inclusive and technology-based value education system. It certainly is more futuristic in its approach involving a paradigm shift in pedagogy, assessment and evaluation.

TEACHER EDUCATION

Teacher education is an on-going, broad, comprehensive, ever evolving dynamic process. Teacher educators have to keep abreast of the recent developments and trends so as to prepare competent teachers to face the challenges of the dynamic society.

The American Commission on Teacher Education rightly observes, “The quality of a nation depends upon the quality of its citizens. The quality of its citizens depends not exclusively, but in critical measure upon the quality of their education, the quality of their education depends more than upon any single factor, upon the quality of their teacher.”

Empowering Teacher educators for a sustainable and better future is the need of the hour. Teacher education is a continuous process. The present-day teachers and teacher educators must possess the technical know-how so that they are well equipped to integrate technology in their teaching-learning process. Technology has become an indispensable part, all the more so in the education sector during the covid-19 pandemic.

VARIOUS PROVISIONS OF NEP 2020 FOR INTEGRATING TECHNOLOGY IN TEACHER EDUCATION

- The National Educational Technology Forum (NETF) will be created to provide a platform for free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration, and so on, both for school and higher education.
- A rich variety of educational software, will be developed and made available for students and teachers at all levels for the purposes of improving teaching-learning and evaluation processes, supporting teacher preparation and professional development, enhancing educational access, and streamlining educational planning, management, and administration including processes related to admissions, attendance, assessments, etc.
- All such software will be available in all major Indian languages and will be accessible to a wide range of users including students in remote areas and Divyang students.
- Teaching-learning e-content will continue to be developed by all States in all regional languages, as well as by the NCERT, CIET, CBSE, NIOS, and other bodies/institutions, and will be uploaded onto the DIKSHA platform.
- The existing digital platforms and ongoing ICT-based educational initiatives must be optimized and expanded to meet the current and future challenges in providing quality education for all.
- A digital repository of content including the creation of coursework,
- Learning Games and Simulation, Augmented Reality and virtual Reality will be developed.

- Student appropriate tools in multiple languages with clear operating instructions will be created for fun-based learning.
- A reliable backup mechanism for disseminating e-content to students will be made available.
- There is a need to invest in creation of open, interoperable, evolvable, public digital infrastructure in the education sector that can be used by multiple platforms and point solutions, to solve for India's scale, diversity, complexity and device penetration.
- Appropriate existing e-learning platforms such as SWAYAM, DIKSHA, will be extended to provide teachers with a structured, user-friendly, rich set of assistive tools for monitoring progress of learners.
- A digital repository of content including creation of coursework, Learning Games & Simulations, Augmented Reality and Virtual Reality will be developed.
- For fun-based learning student-appropriate tools like apps, gamification of Indian art and culture, in multiple languages, with clear operating instructions, will also be created. A reliable backup mechanism for disseminating e-content to students will be provided.
- Existing e-learning platforms such as DIKSHA, SWAYAM and SWAYAMPBHA will also be leveraged for creating virtual labs so that all students have equal access to quality practical and hands-on experiment-based learning experiences.
- Suitable digital devices like tablets with pre-loaded content will be considered and developed.

CHALLENGES IN INTEGRATING TECHNOLOGY IN TEACHER EDUCATION

While on the one side NEP 2020 looks very promising nevertheless, it undoubtedly brings in new challenges in the field of education. Some of the challenges that would arise in integrating technology in education are as follows:

- Teachers to be given suitable training and development to be effective online educators
- Unavailability of technological facilities in the colleges
- Pedagogical changes are required for tech- based approach
- Different approach for online assessment
- Conducting online examination
- Insufficient computers and required software
- Certain types of courses or subjects have limitations
- Handling network and power issues
- Prevailing unethical practises
- Online education would become a screen-based education
- Reduced focus on the social, affective and psychomotor domains of learning

SUGGESTIONS FOR THE INTEGRATION OF TECHNOLOGY IN TEACHER EDUCATION

- Rigorous training to be given to the teacher educators to familiarize themselves with online teaching

- Ratio of teacher educators and teacher trainees to be maintained
- Accept the challenges and try to work on them
- Proper building and infrastructure
- Teacher education institutions must have at least one lab with sufficient computers
- Teacher educators must utilize the systems in their teaching-learning process and thus become role-models to the trainees
- Access to internet facilities to facilitate teaching-learning in the institutions
- Salary hike and incentives may be provided to the teachers
- Follow up by the policy-makers and the concerned authorities is a must.
- Time to time research or pilot studies need to be conducted to find out the outcome

CONCLUSION

India is a developing country with huge population still living in remote areas. NEP 2020 is definitely a positive move. Any transformation cannot happen overnight. It is a gradual process. India has to overcome the challenges before Indian education becomes completely digitalized.

We cannot have a complete digitalized education and it is not appropriate to have one either because with such a system the future generations will somehow miss our Indian values and culture. Things that one may practically do and learn; for example, gardening, will be lost. In some occasions learning by doing is more effective than mere observing. We cannot let our future generation to remain screen-based learners. We should have a blended learning system but be prepared to rise to the occasion whenever required as India was successful during the covid-19 pandemic. However, tech savvy one becomes the presence of a classroom teacher and the values imparted by the teacher cannot be disregarded.

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