



Research Paper

Key Initiatives for Online and Digital Education in India: Major Recommendations of National Education Policy- 2020

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ABSTRACT

New circumstances and realities require new initiatives. The recent rise in epidemics and pandemics necessitates that we are ready with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible. In this regard, the National Education Policy 2020 recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. It calls for carefully designed and appropriately scaled pilot studies to determine how the benefits of online/digital education can be reaped while addressing or mitigating the downsides. In the meantime, 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. In this paper an attempt has been made to describe concept of online education, different kinds of online learning and teaching. It focuses on major key initiatives of online education recommended by national education policy -2020 elaborately.

Keywords: Online Education, Digital Infrastructure, Content Creation, Digital Divide, Information Communication and Technology (ICT) and Online Learning

Received 20 September, 2021; Revised: 03 October, 2021; Accepted 05 October, 2021 © The author(s) 2021. Published with open access at www.questjournals.org

I. INTRODUCTION

Online education is a form of education where students use their home computers through the internet. For many nontraditional students, among them all those who want to continue working full time or raising families, online graduations and courses have become popular in the past decade. Often online graduation and course programs, some of which are conducted using digital technologies, are provided via the online learning portal of the host university. Teachers require suitable training and development to be effective online educators. It cannot be assumed that a good teacher in a traditional classroom will automatically be a good teacher in an online classroom. Aside from changes required in pedagogy, online assessments also require a different approach. There are numerous challenges to conducting online examinations at scale, including limitations on the types of questions that can be asked in an online environment, handling network and power disruptions, and preventing unethical practices. Certain types of courses/subjects, such as performing arts and science practical have limitations in the online/digital education space, which can be overcome to a partial extent with innovative measures. Further, unless online education is blended with experiential and activity-based learning, it will tend to become a screen-based education with limited focus on the social, affective and psychomotor dimensions of learning.

Concept of Digital Education

Digital Education is an evolving area which is primarily concerned with the teaching and learning-process using digital medium. This has evolved from activities such as sharing of text resources and students submitting assignments online to availability of various types of content such as audio, video and multimedia resources. The continuous advancement in the field of Information and Communication Technology (ICT) and

the internet (with virtually unlimited supply of digital resources) has made multiple modes of digital education possible.

Objectives

- To understand the concept of online and digital education
- To know the various kinds of online teaching and learning
- To understand the various key initiatives of Online Education of NEP-2020
- To learn more about digital divide
- To understand online teaching platforms and tools

Kinds of Online Teaching & Learning

There are two kinds of online learning and teaching that schools will need to balance based on the feasibility:

- **Synchronous:** This is real-time teaching and learning that can happen collaboratively and at the same time with a group of online learners or even individually, and usually a teacher, or some method of instant feedback; examples of synchronous learning are online teaching through video conference (two-way video, one-way video, two way audio), audio conference (two way audio) using satellite or telecommunication facilities.
- **Asynchronous:** This is anytime, anywhere learning but not connected on real time, for example, emails, short message service(SMS), multimedia messaging service (MMS), surfing e-content on Digital Infrastructure for Knowledge Sharing (DIKSHA), listening to radio, podcasts, watching TV channels, etc.

Key Initiatives of Online Education recommended by New Education Policy-2020

- **Pilot studies for Online Education:** Appropriate agencies, such as the National Educational Technology Forum (NETF), Central Institute of Educational Technology (CIET), National Institute of Open Schooling (NIOS), Indira Gandhi National Open University (IGNOU), Indian Institute of Technology's (IITs), National Institute of Technology's (NITs), etc. will be identified to conduct a series of pilot studies, in parallel, to evaluate the benefits of integrating education with online education while mitigating the downsides and also to study related areas, such as, student device addiction, most preferred formats of e-content, etc. The results of these pilot studies will be publicly communicated and used for continuous improvement.
- **Digital Infrastructure:** 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. This will ensure that the technology-based solutions do not become outdated with the rapid advances in technology.
- **Online Teaching Platform and Tools:** Appropriate existing e-learning platforms such as Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM), Digital Infrastructure for Knowledge Sharing (DIKSHA) will be extended to provide teachers with a structured, user-friendly, rich set of assistive tools for monitoring progress of learners. Tools, such as, two-way video and two-way-audio interface for holding online classes are a real necessity as the present pandemic has shown.
- **Content Creation, Digital Repository and Dissemination:** A digital repository of content including creation of coursework, Learning Games & Simulations, Augmented Reality and Virtual Reality will be developed, with a clear public system for ratings by users on effectiveness and quality. 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.
- **Addressing the Digital Divide:** Given the fact that there still persists a substantial section of the population whose digital access is highly limited, the existing mass media, such as television, radio, and community radio will be extensively used for telecast and broadcasts. Such educational programs will be made available 24/7 in different languages to cater to the varying needs of the student population. A special focus on content in all Indian languages will be emphasized and required; digital content will need to reach the teachers and students in their medium of instruction as far as possible.
- **Virtual Labs:** Existing e-learning platforms such as Digital Infrastructure for Knowledge Sharing (DIKSHA), Webs of Active-Learning for Young Aspiring Minds (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. The possibility of providing adequate access to Socio-Economically

Disadvantaged Group (SEDG) students and teachers through suitable digital devices, such as tablets with pre-loaded content, will be considered and developed.

- **Training and Incentives for Teachers:** Teachers will undergo rigorous training in learner-centric pedagogy and on how to become high-quality online content creators themselves using online teaching platforms and tools. There will be emphasis on the teacher's role in facilitating active student engagement with the content and with each other.
- **Online Assessment and Examinations:** Appropriate bodies, such as the proposed National Assessment Centre or Performance Assessment, Review and Analysis of Knowledge for Holistic development (PARAKH) School Boards, National Testing Agency (NTA) and other identified bodies will design and implement assessment frameworks encompassing design of competencies, portfolio, rubrics, standardized assessments, and assessment analytics. Studies will be undertaken to pilot new ways of assessment using education technologies focusing on 21st century skills.
- **Blended Models of Learning:** While promoting digital learning and education, the importance of face-to-face in-person learning is fully recognized. Accordingly, different effective models of blended learning will be identified for appropriate replication for different subjects.
- **Laying Down Standards:** As research on online/digital education emerges, National Educational Technology Forum (NETF) and other appropriate bodies shall set up standards of content, technology, and pedagogy for online/digital teaching-learning. These standards will help to formulate guidelines for e-learning by States, Boards, schools and school complexes, Higher Education Institutes (HEIs), etc.

II. CONCLUSION

Technology in education is a journey and not a destination and capacity will be needed to coordinate the various ecosystem players to implement policy objectives. A dedicated unit for the purpose of orchestrating the building of digital infrastructure, digital content and capacity building will be created to look after the e-education needs of both school and higher education. Since technology is rapidly evolving, and needs specialists to deliver high quality e-learning, a vibrant ecosystem has to be encouraged to create solutions that not only solve India's challenges of scale, diversity, equity, but also evolve in keeping with the rapid changes in technology, whose half-life reduces with each passing year.

While digital or online education cannot replace classroom learning, it has some advantages. It allows flexible and personalized learning at the speed of the learner and one can continuously augment and expand content through digital means. The rapid increase in internet penetration and various government initiatives such as Digital India campaign have created a conducive environment for moving towards digital education.

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