

Opportunities and Challenges of Digital Education in view of National Education Policy (2020)

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ABSTRACT

Digital education plays a very crucial role in making learning student-centric, self-paced, flexible and world-class. National Education Policy (NEP 2020) is very much concerned about equity issues and quality education for all learners as far as the digitalization of education is concerned. It has also pointed out the issue of evaluation procedures in digital education as the teachers usually ask objective questions in online mode. The present study has discussed the recommendations of NPE (2020) for digital education and highlighted the opportunities and potential challenges in digitalizing education. The study discussed two innovative platforms Miro and Nearpod for digital education that can be used for interactive learning experiences and active participation of learners in learning. The learning assessment must incorporate some thought-provoking, activity-based questions for the comprehensive evaluation of learning outcomes. The study also focused on three innovative platforms Socrative, Slide and Quizzes for evaluating the performance of learners through digital modes.

Keywords: Online learning; Digital learning; Innovative teaching; Digital India Campaign; Self-paced learning.

1.0 Introduction

Innovations in any field often emerge in response to challenges, if there is no challenge there will be hardly any innovation. Human beings do not like problems and challenges but they are part of life. We cannot forget the overcrowded Indian banks where the consumers had to go through an exhaustive procedure for depositing and withdrawing money. The ATMs (Automated Teller Machines) made the withdrawal and deposition very easy and comfortable. We didn't forget the suffering caused due to demonetization in India in 2016 when the 500 and 1000 currency notes were banned. On the bright side of it was the growth in cashless transactions; the government can easily track them to receive tax. A number of digital payment apps like Google pay, Bhim App, Paytm, Amazon pay, PhonePe became popular and reached the common people. The Covid-19 pandemic, a natural disaster was the biggest challenge for people all over the world. It put to rest almost all social activities for a long time, but digital technology helped us in this pandemic also. Digital technology helped in avoiding crowds and rush in markets by delivering the goods to their homes. People used Amazon.com, Flipkart for online shopping, and Zomato and Swiggy for ordering foods. The education sector could be the worst hit if digital technology hadn't helped. On the recommendation of the World Health Organization (WHO) for curbing the spread of coronavirus disease, the social distancing policy was accepted globally, educational institutions were closed and the conventional way of teaching and learning was disrupted (Adedoyin & Soykan, 2020). Educational institutions have been using digital platforms for teaching and learning. For the Covid-19 pandemic, the Indian government launched 'Bharat Padhe Online' initiative so that the teachers can develop online learning material, share their innovative ideas through educational blogs, wikis and create more and more open educational resources (OERs) (Bordoloi, Das & Das (2021)). Digital technology has saved the future of our learners because they have been receiving online education in their homes.

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The boom in online technology, the internet, and social media has developed a new kind of social constructivism; now the teacher can interact with each student and the students can also interact with their teacher as well as their colleagues (Bordoloi et al., 2021). This pandemic has made it mandatory to follow the social distancing norms; the educational activities are being digitized, so there is need to properly scrutinize the process of digital education (Mathias Decuypere, Grimaldi & Paolo Landri, 2021). The newly formed National Education Policy (NEP, 2020) has also drawn attention towards equitable use of digital technology in educational processes and highlighted the major issues in the digitalization of education.

2.0 Objectives of the Study

- To discuss the recommendations of NEP (2020) for digital education
- To discuss the opportunities of digital education, highlight its major challenges
- To discuss Digital India Campaign and Innovative platforms for Digital Education

3.0 Recommendations of NEP (2020) for Online and Digital Education

The National Education Policy (2020) which is constituted recently; envisages an Indian education system that may be rooted in Indian values and customs. The aims of NEP (2020) are to provide high-quality education to all learners, create an equitable and vibrant knowledge society and make India a global knowledge superpower. The covid-19 pandemic has drawn the attention of policymakers for adopting alternative approaches to educational activities. No doubt, digital technology is helping educational institutions conducting teaching-learning activities online in this situation of the pandemic. For leveraging the digital technology for teaching and learning at all levels from school education to higher level of education NEP (2020) has recommended the following key measures: (i) Conducting pilot studies for online and digital modes of education (ii) Creating digital infrastructure which can connect all learners with their teachers and learning resources (iii) Online teaching platform and tools (iv) Content creation, digital repository, and dissemination (v) Proper measures to address the digital divide among all sections of population (vi) Virtual Labs for quality practical and experiment-based learning experiences (vii) Training of teachers for developing online learning material and teaching on digital platforms (viii) Engaging the relevant bodies for developing innovative ways of Online assessment and evaluation focused on 21st century skills (ix) Adopting suitable blended models of learning with face-to-face interaction as per the nature of subjects (xi) Laying down standards for content, technology and pedagogy for online and digital education which can guide the central and state boards of education.

3.1 Opportunities in digital education

As per the NEP (2020), the high-speed technological advancement when combined with the high level of creativity of tech-savvy teachers and innovators will impact educational processes in multiple ways, a little of which can be predicted at present. The emerging technologies based on artificial intelligence, machine learning, smart boards, handheld digital devices, and other forms of educational software and hardware are going to change what the students are learning and how they are learning, appropriate researches are necessary for both the technological and educational fields. As per the NEP (2020), there is a bidirectional relationship between technology and educational process. Development in technology will have a significant impact on the educational process and vice versa. Digital devices like smartphones, gadgets, and smart boards will result in smart learning. On the other hand, advancements in educational process will result in the preparation and nurturing smart

workforce for the country. Smart education will create engineers, innovators, entrepreneurs, software developers and scientists.

Some of the important benefits of digital learning are as follows:

- Flexibility in learning i.e., learning can be accessed anywhere and anytime
- Self-paced learning i.e., learning can occur at learner's pace
- Enriched learning i.e., digital technology can make learning more comprehensive and easier to grasp and more in-depth
- Best teachers can be hired in online mode as there are no restrictions of location in online mode

3.2 Challenges in digital education

Digital technologies proved to be a gift for the students in this pandemic as they mitigated the loss to learning by conducting educational activities online. As far as the Indian scenario is concerned the online and digital education has some potential challenges. The National Education Policy (2020) has raised the following major concerns regarding online and digital modes of education:

- The digital divide among the learners in India
- Preparedness of teachers in using digital technology
- Assessment and Evaluation of Learners in Digital Mode
- Development of learners' social, emotional and psychomotor domains
- Issue of practical-oriented subjects such as sciences and performing arts

3.3 Digital India campaign and innovative platforms for digital education

One of the major challenges in digitalizing education in India as highlighted by NEP (2020) is the digital divide among various sections of our population. The availability of digital devices, internet facility and awareness about their use in education among teachers and learners have become very critical as far as digital education is concerned. The issue of the digital divide can be addressed with the help of the Digital India Program which was launched in 2015 with a vision to transform India into a digitally empowered society and knowledge economy.

3.4 Digital India campaign and digital education

The Digital India campaign of the Government has opened avenues for digital learning, as mentioned in PRAGYATA Guidelines (Feb. 2021), the Ministry of Human Resource Development (MHRD, Government of India) has initiated PM e-VIDYA on 17 May 2021 in order to continue the learning process smoothly in the time of lockdown. PM e-VIDYA will provide multi-mode access to online learning and will integrate all the efforts in digitalizing learning in India and is going to benefit about 250 million school-going children in the country. This effort comprises of:

Diksha: It is a digital infrastructure of India to provide QR coded textbooks for all grades, MOOCs courses, and quality e-content for students and teachers

Swayam Prabha: TV channel to provide high-quality educational programs one channel for each grade from class 1 to class 12 also runs programs for teacher training.

Swayam: It stands for "Study Webs of Active Learning for Young Aspiring Minds". It is a MOOCs initiative in India with an objective to impart excellent teaching and learning to all including the most disadvantaged section. SWAYAM has coordination from top national institutes in India to ensure excellence in learning.

Iitpal: It stands for "IIT Professors Assisted Learning" meant to assist aspirants of IIT JEE entrance examination and can be accessed via the SWAYAM PRABHA channel.

Radio and community Radio: Mukta Vidya Vaani (MVV) is an Open Radio facility meant for providing educative and informative stuff for excellent learning experiences. This web radio has the facility to pause and replay the audio. Another such effort is Radio Vahini. It is a community radio station of NIOS (National Institute of Open Schooling) meant for drop-outs and learners enrolled through ODL (Online Distance Learning).

Assistance for differently abled learners: NIOS provides e-content for differently-abled (visually challenged and hearing impaired) children such as content in Indian sign language and “talking books” for hearing impaired children.

3.5 Innovative platforms for interactive digital learning

The National Education Policy (2020) has also raised concern about the lack of activity on the part of learners in online and digital modes of education. Therefore, we would like to discuss some interactive digital teaching-learning platforms which can provide experiential and activity-based learning experiences to learners.

Miro: It is an online whiteboard that can be used for collaborative interaction in teaching virtually and interactively anytime, anywhere. The salient features of Miro are: (i) Virtual Brainstorming: Miro can be used to encourage the learners to ‘think out of the box’ and develop creative ideas and answer the thought-provoking questions. (ii) Mind Mapping: We can use Miro to connect the central concept to related concepts, topics, or ideas, this is called mind mapping. Our brain thinks of any object or idea in relation to other objects or ideas that are associated with it. Miro can create non-linear mind maps for any concept that’s how our memory works. We start with the central idea or concept and add the related sub-ideas or sub-concepts to it and repeat the process and you will get the required. After creating a mind-map on Miro we can share the board with the participants/learners in real-time and can allow them to view, comment, and edit it. (iii) Online Workshops: Online workshop on Miro will give you a chance to explore specific details of any concept or topic more interactively than any traditional online meeting. A large number of participants can work together all at once or in small groups on a specific task by using the Miro platform in real-time. (iv) Collaborative Virtual Meetings: Miro can be used for conducting collaborative virtual meetings and can ensure real-time participation for all participants. Miro provides us the facility to record the meeting and enable the participants to share their screens from their own desks at their places.

Nearpod: Nearpod is a digital platform for interactive teaching and learning in real-time through interactive lessons, interactive videos, and games activities. In Nearpod, the teaching and learning activities are carried out through: (i) Interactive Slides: We can create slides-based interactive lessons and collect the learners’ data regarding the understanding of the concept or topic by adding formative assessments or we can choose from thousands of ready-to-teach lessons that can be customized. (ii) Interactive Videos: Similarly, the interactive videos with built-in questions can be created in Nearpod for sharing directly with the learners or we can choose from standards-aligned videos from the Nearpod library. (iii) Gamification and activities: For providing more engaging and deeper learning experiences to learners, Nearpod has the gamification activities like Time to Climb, Matching Pairs, Draw it, etc. We can create our own activities or choose from thousands of activities as per the grade and subject.

3.6 Innovative platforms for evaluating learners’ performance in digital learning

Assessment and evaluation are very essential in teaching and learning that is the reason that NEP (2020) is concerned about examination procedures in the digital mode of education. Most of the time, MCQs are being asked for evaluating learners’ performance. Thus, we need some innovative platforms for assessing learners’ learning in multiple ways for comprehensive evaluation. We are

going to discuss three innovative platforms for instant evaluation of learners' performance.

Socrative: Socrative has been delivering formative assessment tools to teachers around the world since 2010. In Socrative, the teachers can modify their instruction for carrying out students' learning most effectively. The most popular quiz game in Socrative is 'Space Race countdown timer' which has team-based activities in each round. In Socrative, 20 activities can be launched at once such as creating multiple quizzes, conducting classroom polls or mini-competitions for assessing learners' comprehension, and keeping track of students' learning in real-time. Socrative is very much suitable for large classrooms because we can actively engage 50 students per room at one time. Socrative allows us to set up 20 different rooms for different subjects or classes in which students can access their respective subjects or classes by using their codes.

Slido.com: It is a digital platform for questions & answers (Q&A) and polling of the students that can bridge the gap between teacher and learners. In Slide, everyone can ask questions and vote for what he/she likes the most. Live polls make this platform more interactive and help in initiating the communication between teacher and learners, checking knowledge, and getting instant feedback. Slide allows us to create a fun quiz that can be used to 'break the ice', recapitulate the content, and entertain or test our learners. Slide analytics helps us to collect valuable insights about our learners and select the topics resonating with our learners and take appropriate decisions. Slide can also be used for brainstorming the ideas by collecting and curating the best ideas from the participants for making a decision about a team project or summarizing key concepts from a workshop.

Quizzes: It is an Indian software company that creates gamified quizzes and interactive lessons for engaging the learners in learning activities. The interactive lessons and activities can be accessed anytime, anywhere and the deadlines can be given to complete the quizzes. We can share the gamified quizzes via emails or LMS and the participants can join them from any device. For the individualized study, there are options of flashcards and retakes in Quizzes. This platform enables us to review what is working and what is not working and identify instantly the problem areas regarding any participant, class, or question.

4.0 Conclusion

In the present study, we tried to focus on digital education, the opportunities, and challenges in digitalizing the educational processes in the Indian scenario. This study is aligned with recommendations of the National Education Policy (2020) as far as opportunities and challenges in digital education are concerned. The NEP (2020) has referred to Digital India Campaign for removing the barriers and digital divide in India. So, we discussed Digital India Initiatives for online and digital education. For making online learning more interactive, some innovative platforms such as Miro and Nearpod are discussed. NEP (2020) raised concern about the unethical practices and types of questions that can be asked for the assessment and evaluation of learning in online and digital modes. We discussed some innovative platforms such as *Socrative*, *Slide*, and *Quizzes* for evaluation of learning in digital mode. These platforms can help us to a great in making the evaluation process more interactive, fair, and comprehensive.

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