

“A Critical Reflection On Digital Education And Digital Divide In India With Special Reference To The National Education Policy-2020, (N.E.P. 2020).

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ABSTRACT

The advent of electronics has made advances in science & technology and formal, non-formal, and informal education. Technology is used to disseminate knowledge in education, and the Internet and technology have been widely used in distance education. However, with the widespread diseases and the Covid – 19 pandemic, the use of the Internet and technology has forced schools and institutes to adopt online teaching. In recent studies on online education during COVID-19, pandemic researchers observed opportunities and threats in using digital education. Moreover, threats are related to the digital divide between students and equitable quality education for all students. In India, due to diversity and disparity among the vast population, there is a challenge in providing affordable digital devices and e-content to all students, thus negatively impacting student learning. There is a significant digital divide in India between those who own digital devices and those that don't. As a result, the digital divide and infrastructure development to provide digital education to the masses are highlighted in the policy document the “National Education Policy-2020” (N.E.P.).

KEYWORDS: “National Education Policy-2020” (N.E.P.), NEP-2020, Digital Divide, Equity, D.I.K.S.H.A., SWAYAM PRABHA.

INTRODUCTION

Recent studies found positive and negative effects on education due to online teaching and lockdown. The findings by Jena, n.d. show that infectious Diseases Covid – 19 have posed many challenges for India and all the world's education sectors. It has also forced educational institutions to use digital platforms to provide equitable and quality education. Further, in this study, it is observed that access to quality education is impossible for all students in India because digital platforms are not available for each student. In India, most students do not have access to digital technology, which negatively impacts student learning Jena, n.d. There is a comprehensive digital gap between those who have digital equipment and those who do not have access to digital equipment in India. Consequently, the digital gap and infrastructure development to provide digital education to the masses are addressed in the “National Education Policy-2020” (N.E.P.-2020). The primary focus of the N.E.P. 2020 is to provide equal access to online technologies and internet education by minimising the digital divide.

OBJECTIVES OF NEW EDUCATION POLICY - 2020

The “National Education Policy-2020” (N.E.P-2020.) states: that the digital divide can be removed in India through the equitable use of online and digital education and technology; the following are some of the objectives of N.E.P., 2020;

1. To use online and digital education to bridge the population's digital divide.
2. To provide quality education and compelling content through online and digital education.
3. To create and develop e-content and provide a digital learning platform to access digital storage.
4. To create engaging and exciting e-content so that it is attractive, meaningful, and interesting for the learners.

PROVIDING ONLINE AND DIGITAL EDUCATION TO ALL

New Education Policy N.E.P., 2020 envisages providing quality and engaging content and infrastructure to all learners, thus ensuring fair use of technology. Besides using technology and online education, it also stressed alternative and continuing education in India. According to the New Education Policy N.E.P., 2020, teachers and educational institutions need to prepare themselves for alternative quality and equitable education methods with technological advances and their use in teaching. Traditional teaching modes are impossible in situations such as the COVID-19 pandemic and lockdown; therefore, teachers and institutions should adapt to alternative teaching modes N.E.P., 2020. In India's prevailing cases and throughout the world, students, teachers, and institutes must adopt advanced technology to disseminate information. The use of technology has advantages and poses various disadvantages, threats, and potential risks in education. N.E.P., 2020 has proposed better-designed and appropriate pilot studies to quantify the benefits, weaknesses, and potential risks N.E.P. 2020. The application of technology has brought a revolution in the education sector. Due to this revolution, the nature of teaching, examinations, and learning has also changed.

Similarly, the students and teachers have faced various teaching and learning challenges. The most challenging aspects of technology are the digital divide and the unavailability of digital resources. Besides this, digital distribution and effective teaching are the most critical challenges teachers and students face G.O.I., 2020.

INITIATIVES BY THE GOVERNMENT OF INDIA

In India, the government has taken initiatives to bridge the digital divide and started the Digital India campaign to make online or digital education a success. The government has also initiated to end the digital divide and provide students with affordable computing tools and quality e-content. The applications of Information and Technology (I.C.T.) for online and interactive teaching is the focus of N.E.P. 2020 and attempts to resolve educational equity issues. The N.E.P., 2020 has suggested using affordable technology and Open-Source Software for making e-content and developing free and Open-Source online platforms and the Learning Management System (L.M.S.) so that the digital divide issue is resolved. Free and open-source software,

along with digital libraries, could be used to meet present and prospective challenges to deliver realistic and high-quality education to all.

TEACHERS TRAINING AND DEVELOPING ICT COMPETENCIES

In India, there is a comprehensive digital divide between students and teachers. Therefore, teachers must acquire digital and digital skills knowledge to teach effectively and efficiently on digital platforms and conduct online classes. Teachers should also possess the necessary Information and Communication Technology (I.C.T.) competencies for teaching online courses. Therefore, there is a need to train in-service teachers and their professional development to have the necessary digital technology skills and become effective online teachers G.O.I., 2020. It is observed from recent research that there is a difference between classroom teaching and online teaching; the teachers who teach effectively with chalkboards may need the ability to lead with a mouse and keyboard. Therefore, to make online teaching effective, teachers should be given appropriate knowledge and training to develop digital technology skills and competencies (G.O.I., 2020).

DEVELOPING QUALITY E-CONTENT:

In online education, compelling, engaging, and exciting content increases students' enthusiasm and attention. Recent studies on online education found that students are more active in experimental and activity-based learning. This activity-based technique develops students' social, learning-effective, and psychomotor domains (G.O.I. 2020).

ONLINE ASSESSMENT

The I.C.T. and Online Education Systems have been revolutionising by Content Management Systems (C.M.S.) and Open-Source Learning Management Systems (O.S.L.M.S.).The C.M.S. and L.M.S. have a significant impact on the online evaluation system. With these platforms' help, it is possible to conduct online exams and efficiently perform the learners' formative and summative evaluations. As cited in (G.O.I. 2020), innovative Web 3.0 technology and software features help conduct online examinations and provide immediate feedback to students.

Nevertheless, online evaluation has some limitations; these limitations relate to the types of online formats, queries, power failures, and unethical practices. There are limitations in assessing subjects such as Performing Arts and the online assessment of science practicals. However, teachers and institutions can overcome these limitations using the latest technology and their artistic approach G.O.I., 2020.

LEVERAGE DIGITAL EDUCATION

(A) USE AND INTEGRATION OF TECHNOLOGY IN EDUCATION

NEP 2020 addresses the digital divide and equity problems in education by emphasising digital technology's role in providing engaging, adequate, quality, and equity education for students, teachers, and society. There are challenges in technology-related matters; therefore, N.E.P., 2020 also highlights these challenges related to expertise, speed, and scale. The vision of N.E.P. 2020 is the "use and integration of technology" in the education system. As a result, by effectively executing the N.E.P. 2020 vision, India can be transformed into a digitally empowered country

and economically knowledgeable society. In science and technology advancement, online education can be automatic, and teaching can be made adaptive to learners' needs and styles. Adaptive and augmented technology can enhance the learners' experience.

Furthermore, learning can be made more interesting with the use of technologies such as Artificial intelligence (A.I.), virtual reality (V.R.), machine learning (ML), innovative class, intelligent devices, adaptive technology, and educational software and hardware. There are rapid development and advancement in technology. Moreover, they are used extensively in teaching. The use of technology has also been emphasised in the N.E.P., 2020. It states that state-of-the-art technologies in education and extensive research in these new fields require bridging the digital divide and equitable education PIB 2020. The appropriate organisations, such as N.E.T.F., C.I.E.T., N.I.O.S., I.G.N.O.U., I.I.T.s, and N.I.T.s, must perform pilot studies and shape linkages that benefit online education to close the digital gap and provide equity in education. The outcomes of the pilot studies will boost policymaking by various government entities N.E.P., 2020.

(B) DEVELOPMENT OF DIGITAL INFRASTRUCTURE

India is a multi-culture, diverse, complex, and multi-faceted country with a disparity in education and broad digital divide issues. Therefore, there is a need for an open, interoperable, interactive, and evolving public digital infrastructure in education. All sections of society can avail of its benefits. With the rapid development in Information and Technology (I.T.), the emphasis should also be made on developing public digital infrastructure. This development will ensure that outdated technologies stay relevant with rapid technological advances N.E.P., 2020.

(C) ONLINE LEARNING AND TEACHING PLATFORMS AND WEB 3.0 TOOLS

In India, the government has taken many initiatives to remove the disparity in digital literacy. According to a G.O.I. 2020 report 2020, the digital program D.I.K.S.H.A. (Digital Infrastructure for Knowledge Sharing) is accessible with hand-held devices and mobile and web browsers. For school education in India, the platform D.I.K.S.H.A. is ubiquitous and easily accessible through many devices and online portals. D.I.K.S.H.A. provides the content in the form of Textbooks Energized. Textbooks (ETBs), curriculum-based courses, quizzes for teachers, and e-content. There is a digital disparity in access to the Internet in India, and many students need access to high-speed and affordable Internet. To address this gap, the G.O.Is. Ministry of Human Resources Development (M.H.R.D.) has launched the S.W.A.Y.A.M. Prabha programme, which provides D.T.H. services to students who do not have access to the Internet. The S.W.A.Y.A.M. Prabha and D.I.K.S.H.A. Platform offer a high-quality educational program through T.V., Home channels. These platforms can also provide structured and user-friendly assistive tools for monitoring students. According to G.O.I., 2020, the online teaching platform and instruments help conduct online classes through a two-way audio and video interface.

(D) DIGITAL REPOSITORIES / RESOURCES AND DIGITAL STORAGE

According to N.E.P., 2020, a standard e-content and courses will be developed as a digital repository, including coursework, gamification, application, simulation, virtual reality, and augmented reality. The created resources will be available in multiple languages to provide digital education equity to the students in their mother tongue.

(E) DIGITAL DIVIDE AND ACCESS TO DIGITAL EDUCATION

India is a vast and diverse country, and there is a digital disparity in the student population, which creates barriers such as digital illiteracy and a lack of digital skills and infrastructure. There are digital gaps in accessing information in India's population, especially in rural areas. The digital gap or divide into rural areas is minimised, and the gap can be bridged by providing educational programs, e-material, and e-content in multiple languages. Access to e-content and educational programs will be made 24/7 to meet students living in rural areas (Singh, 2010.)

(F) AUGMENTED AND VIRTUAL REALITY

In education, augmented and virtual reality is used to provide concrete learning to the learners, and abstract concepts are also made concrete. Web-based education helps disseminate content based on the idea. However, it is challenging to give experimental and skill-based content, but these disadvantages are overcome by virtual labs and augmented realities Balasubramanian 2020. N.E.P., 2020 recognises the importance of virtual labs and virtual classrooms. The government provides virtual labs in India. Some of these platforms are SWAYAM PRABHA, D.I.K.S.H.A., SWAYAM III, and SWAYAM PRABHA; these Virtual Labs can also provide students with formal practical and experiential learning. There is a disparity among the population in India concerning social, economic, and education. Most students belonging to socio-economically disadvantaged groups (S.E.D.G.s) do not have access to standard equipment and tools. Students and teachers at such (S.E.D.G.) will be provided with appropriate digital devices by the government, such as Open Source Software and e-content Tablet N.E.P., 2020.

(G) TRAINING FOR EDUCATORS IN DEVELOPING E-CONTENT

Quality and attractive content make teaching exciting and purposeful. Thus, teachers should be given hands-on experience in developing the e-content, and adequate training should be provided using eLearning software and tools N.E.P., 2020.

(H) ONLINE ASSESSMENT AND EXAMINATIONS

As cited in N.E.P., 2020, Online assessments and examinations will be designed and implemented by appropriate organisations, like National Assessment Centre (N.A.C.), P.A.R.A.K.H., state boards, and the National Testing Agencies (NTA). The online assessment and examination framework will be based on 21st-century skills such as educational qualifications, learners' portfolios, rubrics, standardised assessment tools, and evaluation analytics.

I) BLENDED TEACHING AND LEARNING

Education is imparted through modes, such as Online and Face to Face, but both education modes have advantages and disadvantages. Therefore a mixed form of education is used by selecting benefits from both modes of instruction. This mixed or composite mode of education is called the blended mode of education. Blended education combines different approaches that combine online learning and (face-to-face) teaching, thus helping students access online resources anytime from G.O.I., 2020. At the same time, it can give students face-to-face classroom benefits. In blended teaching, learning is offered individually, and students learn at

their own pace and style, thus reducing stress levels, increasing student satisfaction, and retaining information Giarla 2020.

J) KEEPING STANDARDS

Recent studies have shown that online education should be designed and developed according to infrastructure and technology availability. Therefore, the content and teaching process should be based on some industry or institution's minimum standards. These standards will help states, boards, schools, and higher organisations develop guidelines for e-learning G.O.I., 2020.

K) CAPACITY BUILDING

NEP 2020 suggests building the capacity between the government agencies and the Ministry to implement policies framed by N.E.P. The Ministry will develop dedicated infrastructure units, digital e-content, and capacity-building programs to resolve the needs of the schools and higher education G.O.I., 2020.

CONCLUSION

Advances in information technology have led to diversification in education, and Many issues like digital divide inequality among learners have arisen. Therefore, to solve the problems arising from the digital divide and inequality in quality education and accessibility, the N.E.P. 2020 has suggested establishing centres and appointing experts and government agencies to look after all the issues arising from technology advancements. To provide quality education, N.E.P. 2020 emphasise developing digital skills and competencies in in-service teachers. N.E.P. 2020 has also highlighted providing an affordable and accessible virtual platform through its agencies such as SWAYAM PRABHA, D.I.K.S.H.A., SWAYAM III, and SWAYAM PRABHA; these Virtual Labs can also provide students with formal practical and experiential learning. The digital platforms S.W.A.Y.A.M. Prabha and D.I.K.S.H.A. disseminate a high-quality educational program through T.V. and Home channels. These platforms can also provide structured and user-friendly assistive tools for monitoring students. The L.M.S. and tools will be used in conducting online classes through a two-way audio and video interface. Government agencies have also taken initiatives to bridge the digital gaps in online education by developing educational materials and educational programs for students living in remote and rural areas.

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