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Digital Learning: Outlook, Viewpoints, and Challenges in the Transforming Landscape of NEP-2020

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Abstract

Digital education, although primarily a modern concept from the last few decades, has roots in earlier forms of remote learning. As technology advances and digitalization encompasses various aspects of our lives, significant transformations are on the horizon for the educational system. These innovations will bolster our defenses against both natural and man-made disasters, such as the Covid-19 pandemic that plagued 2020. The internet and various electronic media platforms play pivotal roles in making this possible.

Online learning can be accessed through numerous platforms including Massive Open Online Courses (MOOCs), YouTube, social media, Telegram, and more. MOOCs stand out as the premier choice for virtual education, offering degrees akin to traditional institutions. In this comprehensive analysis, we will delve into the realm of digital education in India. We aim to explore its objectives, varying perspectives, and challenges involving shifting paradigms. Moreover, we will examine potential issues arising from the integration of digital education within the National Education Policy 2020 (NEP-2020).

Keywords: *Digital Education, NEP-2020, MOOCs*

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INTRODUCTION

Digital and online education represents the future of learning, employing computer-based programs to impart knowledge. This innovative approach to education delivers career-oriented courses entirely or partially through the internet, intranets, or extranets. Embracing online education can be the key to unlocking a successful career journey. As a rapidly evolving field, digital education focuses on teaching and learning through various digital formats. Contemporary educational resources now include audio, video, multimedia, as well as traditional text-based content and online assignment submission.

Online education has gained significant importance in the National Education Policy (NEP) 2020. To optimize the advantages of digital learning within India, prestigious institutions like NITs and IGNOU will conduct pilot research studies. Learning management systems (LMSs), such as DIKSHA and SWAYAM (a research center for young minds) will be revamped with new curriculum, classroom resources and better assessment methods. Creating a digital integration and integration that can be used by multiple platforms is also one of the main goals of the initiative.

The boundless nature of the Internet's digital information—combined with rapid advancements in Information and Communication Technology (ICT) and its industry—has expanded the horizon for digital education opportunities. ICT plays an essential role within modern society; it pervades various aspects of life including economic sectors such as education, business administration, telecommunications, agriculture, healthcare, tourism, and security.

Information and Communication Technologies like mobile phones, computers, and the internet are now indispensable in everyday life. The utilization of this technology is continually increasing across households, communities, educational institutions, countries, and around the globe. This widespread adoption solidifies the relevance and importance of integrating ICT in today's education systems.

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ICT IN EDUCATION:

The New Education Policy (NEP) 2020 places great emphasis on the utilization of technology to prepare well-equipped educators. It assures that instructional software will be accessible to learners and instructors across all stages of education. Teacher education is a vital process that equips teachers with the necessary skills and understanding to perform their duties effectively and progress in their careers. This essential process enhances learning and teaching capabilities.

The integration of information and communication technology (ICT) has facilitated the adoption of the new role of the teacher, including the process in everyday teaching and teacher education. ICTs play an important role in our "knowledge economy". It helps to manage knowledge and address social, economic and cultural issues as science, technology and expansion (UNESCO, 2002). ICT is an important tool that helps teachers become more involved when it matters to the classroom.

With the emergence of new technology, teaching is evolving from a teacher-centered, teaching based approach to a student-centered, interactive learning environment. ICT is well suited for the adoption and use of constructivist evolving pedagogy in Voogt's classroom (2003) (Davis, 1997; Office of Technology Evaluation, 1995; Educational Technology Group, 1997; Watson, 1996). In a knowledge society, as Jaiswal (2011) thus points out, teacher training supported by ICT-driven infrastructure can be very effective while providing quality learning, teaching and leadership. Additionally, ICT proves extremely beneficial in various teacher education programs such as pre-service and in-service courses. ICTs are valuable tools in education, particularly when dealing with seasoned learners who expect detailed and comprehensive information. Integrating ICTs, such as PowerPoint presentations, platforms like Google Classroom and Meet, e-resources, e-libraries, computer labs, and various educational events like seminars, workshops, webinars, conferences, and YouTube tutorials all contribute to a rich learning experience. During micro-teaching sessions, simulations, and internships, student-teachers often incorporate ICTs into their instructional methods. The internet allows both educators and students to access current knowledge and information.

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As the pandemic unfolds, there has been a significant evolution in ICT skillsets and platforms in various areas including teacher education, general education, and research. E-resources have emerged across numerous disciplines; however, some gaps still exist in certain sectors. Additionally, e-resources have not yet been made available in many regional languages, indicating room for improvement in this domain.

INTEGRATION OF ICT WITH EDUCATION:

In the twenty-first century, we are witnessing rapid developments across the globe in areas such as Artificial Intelligence, big data, machine learning, as well as countless other scientific and technological breakthroughs (Aithal, P. S., & Aithal, S., 2016). Undeniably, education plays a crucial role in fostering a digitally empowered society. However, it is essential to recognize the significant part that technology also contributes towards improving educational methodologies and outcomes.

This policy pays close attention to and acknowledges the symbiotic relationship that exists between technology and education. It emphasizes that the appropriate incorporation of technological advancements at every level of education is vital to not only support teacher training and development but also to enhance teaching methodologies, learning experiences, evaluation processes, and increase educational accessibility for underprivileged groups and the government's initiative to enhance educational planning, administration, and management has been made more efficient through the utilization of technology (Government of India, 2019). The incorporation of digital tools aids instructors in overcoming language barriers and constructing extensive digital libraries, thus becoming a crucial aspect of the strategic plan. Alongside fostering multidisciplinary research and groundbreaking innovation, the approach emphasizes the application of technological advancements to refine teaching methods and optimize education planning and administrative processes. Additionally, the policy highlights the creation of an Academic Bank of Credit, leveraging technology to bolster the efficacy and transparency of regulatory authorities. It acknowledges potential obstacles arising from implementing Artificial Intelligence while advocating for increased investments in digital infrastructure and virtual platforms (Mitra Y. & Singh D., 2020).

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ACCEPTANCE OF FUTURE TECHNOLOGY:

No longer a fresh idea, the use of technology in education has become commonplace. In 1992, India began the process of adopting this potentially trans-formative educational instrument. The revised National Policy of Education-1992 aimed at bringing significant reforms in the educational sector. Despite various programs and initiatives, its acceptance faced multiple challenges such as infrastructural constraints and a deeply-rooted teacher-centered pedagogic culture. As Kundu and Dey (2018) point out, these factors contributed to the slow and less enthusiastic adoption of the policy. The field of educational technology has been captivated by advances in artificial intelligence (AI) and information and communication technology (ICT). When COVID-19 was declared a pandemic, ICT's predominance in educational technology was certainly established (Kundu and Bej, 2021a). Human considerations are a significant consideration in the acceptance of new technologies. Teacher perspectives, attitudes, behavioral intents, mindsets, efficacy, and self-concept are vital in the adoption of ET because teachers are at its core (Guoyuan et al., 2010; Chigona, 2015; Kundu, 2020). There is evidence that teachers are not fully utilizing ICT technologies in schools, as Aldunate and Nussbaum (2013) accurately point out. To begin with, there are various elements that influence the acceptance of technology in education, all of which, according to Ertmer (1999), Educational technologies (EdTech) are impacting education across various countries and cultures in a similar manner. For instance, India's Digital India Scheme, launched in 2015, aims to increase the nation's digital competency by enhancing digital infrastructure and promoting the adoption of educational technologies. A key example of this trend is the emergence of high-quality digital content and online teaching platforms, such as digital repositories and electronic assessment tools. These resources are revolutionizing learning experiences and making education more accessible to diverse populations. One of the most important components of the development is the introduction of the DIKSHA e-portal, which delivers educational e-material to instructors, students, and parents while also offering professional development programme to teachers.

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NATIONAL EDUCATIONAL TECHNOLOGY FORUM

The National Educational Technology Forum (NETF) operates autonomously as an organization that convenes to deliberate, plan, and oversee technology-supported education across all levels from elementary school to university. Initially, under NETF, e-courses will be made available in eight regional languages (IE, 2020), and suitable virtual labs will be established to broaden e-learning access throughout the nation, given that stakeholders possess the necessary digital infrastructure. Considerable focus has been placed on creating and fortifying existing digital infrastructure. A National Educational Technology Forum (NETF) has been proposed for all educational institutions in the country (Government of India, 2019) to promote an unrestricted exchange of ideas on employing technology to enhance teaching, learning, assessment, management, and administration. (Government of India, 2019).

NETF aims to assist in decision-making concerning the introduction, positioning, and application of technology by offering guidance to educational institutions, governments, and other stakeholders (Mitra Y. & Singh D., 2020). Moreover, it will supply updated information and research as well as opportunities to connect with experts and discuss best practices. Central and state governments will receive guidance on improving educational technology's intellectual and institutional capacities while envisioning strategic directions in this field. A continuous stream of genuine content from various sources will be accessible, and NETF intends to organize conferences and seminars to foster the growth of an informed society (Panditrao, M. M., & Panditrao, M. M., 2020).

IMPLICATION OF DIGITAL EDUCATION

Digital technologies enhance students' critical thinking abilities. Traditional classrooms often impose time restrictions, offer limited individual attention, and may not cater to students with varying learning capacities. However, digital mediums allow students to learn at their own pace through pre-recorded videos. Parents can observe online learning sessions and motivate their children to participate, better understanding the connection between classroom and online lessons. For knowledge-driven students, online education grants access to lessons

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24/7, enabling them to attend lectures from home. There are no geographical boundaries for learning activities in this format.

CHALLENGES

The 2020 National Education Policy emphasizes digital and online education. Despite the numerous advantages and unparalleled access to high-quality education offered by digital learning, certain shortcomings may hinder the effectiveness of online courses (Kundi & Nawaz, 2014). (2020, ION Professional E-learning Programs). Additionally, limited computer literacy poses a challenge to online education. Here are some issues faced by digital education:

1. The "digital divide" is a term used to describe the gap in digital literacy, where some individuals regularly use and understand digital devices while others remain unaware of or unfamiliar with digital technologies.

2. Many instructors are imparting knowledge without proper accreditation of their learning materials, leading to concerns about the quality of education as multiple learning platforms emerge.

3. In India, the population falls under three socioeconomic categories. People belonging to upper and middle classes adapt easily to technology integration and the usage of electronic devices; however, those in lower socioeconomic groups often struggle.

4. The current educational system faces challenges with basic learning infrastructure while simultaneously attempting to move towards digitalized learning. The government has been striving to allocate 6% of GDP towards education for years but has yet to achieve this goal. A strong electrical infrastructure is necessary for successful digital and online learning.

5. Digital and e-learning methods may not be suited for hands-on activities in higher education. It's essential not only to gain knowledge but also to apply it effectively (Naresh & Rajalakshmi M., 2017). (Cunha et al., 2020).

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CONCLUSION

It is universally acknowledged that the incorporation of technology-based education in the learning environment is essential. The Indian government has unveiled a draft of the National Education Policy 2020, which emphasizes a more cohesive approach to learning through the use of technology and maximizing digital and online education opportunities. Over the past two years, India's education sector has seen significant growth and transformation, contributing to our mission of creating a smarter world.

To successfully execute digitalization within the education sector, substantial investments in infrastructure are necessary, along with reliable electrical and telecommunication networks, English-speaking tech-savvy teachers, and more. The government must implement measures to ensure students cannot access uncensored content, as it is crucial to consider our youth as valuable assets and vigilantly protect them from cyber threats.

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