INTEGRATION OF COMMUNICATION TECHNOLOGY AND EDUCATION: KEY POINTS OF NEP-2020

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Abstract- **The New Education Policy (NEP), which was drafted in 2019 and approved by the Indian Federal Cabinet on July 29, 2020, is considered one of the most significant policies of the 21st century. This policy demonstrates a dynamic and visionary approach by integrating Information and Communication Technology (ICT) into education. The combination of technology and education has the potential to empower society digitally, showcasing the two-dimensional link between the two. It is a well-established fact that technology will impact education in numerous ways. The integration of ICT into the educational system is a complex and multifaceted process that involves various aspects such as planning, infrastructure, character building, and financing content in educational policies. The effectiveness of student-centered learning heavily relies on teachers' technological knowledge and their ability to leverage it. The implementation of ICT has already provided educators with a significant opportunity to shape the future leaders of India, fostering their versatility. This paper aims to highlight the provisions of the NEP 2020 that pertain to the inclusion of ICT in higher education. Additionally, suggestions will be put forward for the successful implementation of ICT in higher education.**

Key words: **NEP 2020, Information & Communication Technology, Higher Education, Provisions & Challenges.**

INTRODUCTION

ICT, or information and communications technology, refers to the application of technology in processing information and communications. It involves the use of computers, software, and other tools to convert, store, process, transmit, and retrieve information. In the 21st century, the demand for ICT in education has significantly increased.

The New Education Policy (NEP) recognizes the importance of ICT in various aspects of education. The policy highlights the role of technology in supporting teachers, particularly in overcoming language barriers, which is particularly relevant in a multilingual country like India. It also emphasizes the creation of digital libraries and the establishment of a technology-based platform for teacher education. Furthermore, NEP promotes interdisciplinary research and innovation and focuses on enhancing the teaching-learning process and educational administration.The NETF will have the following responsibilities:

✓ Advising central and state agencies on technology-enhanced education;
✓ Building an infrastructure for educational technology;
✓ Providing policy in this area; and
✓ Devising new avenues for research and innovation.

Figure 1: Initiatives at Online Platform

1.1. Objective of the study
➤ To investigate the NEP 2020 provisions for the inclusion of ICT in higher education.
➤ Investigate the challenges of implementing ICT in accordance with NEP 2020
➤ Proposals for effective measures to introduce ICT in higher education

1.2. Current status of ICT in Higher Education
In the 21st century, the use of various information and communications technologies (ICTs) has greatly contributed to improving access to education and enhancing its relevance in the rapidly changing ICT-driven workplace. The integration of ICT can bring about a transformative impact on the Indian education system. Within this context, teachers play a crucial role in utilizing ICT tools for effective teaching and assessment.

However, it is important to acknowledge that a significant portion of rural India still faces challenges in terms of digital access. A government survey conducted between July 2017 and June 2018, with results released in November 2019, revealed the following:
(a) Only 4.4% of households in rural India own a computer, compared to 23.4% of urban households.
(b) 14.9% of households in rural India have internet access, compared to 42% of urban households.
(c) Internet usage in rural India is increasing, but it is predominantly through mobile phones, which is the case for both rural and urban areas.
For educational purposes, students require access to some form of digital hardware, such as smartphones, computers, or tablets. However, the current reality is that many students from underprivileged backgrounds have limited or no access to devices, internet connectivity, and, in some cases, even electricity.
This lack of digital infrastructure and access poses a significant challenge to implementing ICT-based education initiatives effectively in underprivileged areas. It underscores the need for comprehensive efforts to bridge the digital divide and ensure equal access to educational opportunities for all students, regardless of their socioeconomic background. (Sharma Nidhi, 2022)
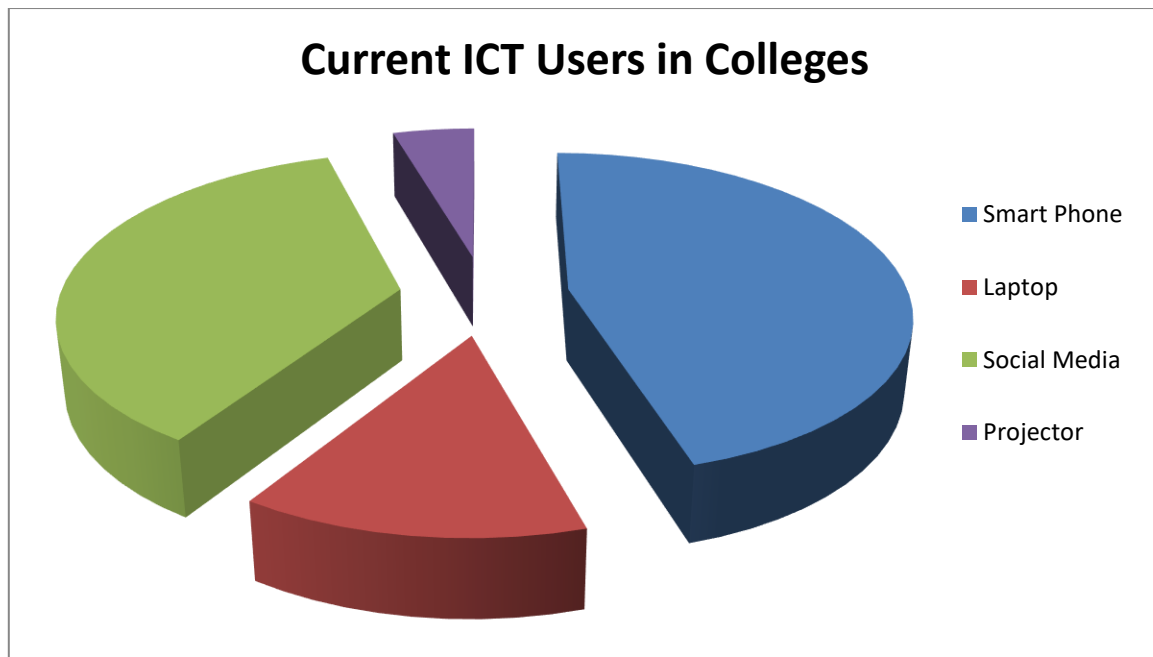
Figure 2: Current Status of ICT uses in Higher Education by Students

1.3. Provisions of NEP 2020 for ICT in Higher Education
In the present era, there is a significant demand for digital platforms that support ICT-based educational initiatives. Recognizing this need, the National Education Policy (NEP) 2020 acknowledges the importance of technology and emphasizes the exploration of online and digital education through pilot studies. Strengthening digital platforms and ICT-enabled educational efforts becomes imperative to address the challenges in providing quality education to all.

NEP 2020 highlights several key provisions regarding technology and education:

➢ Promotion of technology platforms: NEP encourages the promotion of established technology platforms such as SWAYAM and DIKSHA. These platforms facilitate the delivery of standardized and well-known training programs to a large number of teachers within a short period.

➢ Establishment of the National Educational Technology Forum (NETF): NETF will serve as a platform for utilizing technology to enhance teaching and administrative practices in higher education. It aims to facilitate the adoption and effective utilization of technology by providing leadership, knowledge updates, and research guidance to educational institutions and government bodies.

➢ Availability of educational software and content: NEP emphasizes the availability of educational software for teachers and students at all levels, including students with disabilities (Divyang students). It envisions the provision of electronic teaching and learning content developed in regional languages by various entities such as NCERT, CIET, CBSE, NIOS, etc., which will be uploaded on the DIKSHA platform.

➢ Provision of ICT equipment: NEP emphasizes providing appropriate ICT equipment to teachers, enabling them to integrate electronic content into the teaching and learning process effectively.

➢ Specialized e-learning expertise: NEP acknowledges that being a good teacher in a traditional classroom does not automatically guarantee proficiency in an online teaching environment. Considering the rapid advancements in technology, there is a need for specialists who can deliver high-quality e-learning experiences.

Overall, NEP 2020 is a progressive step towards the future of education, recognizing the pivotal role of technology in facilitating teaching and learning processes.
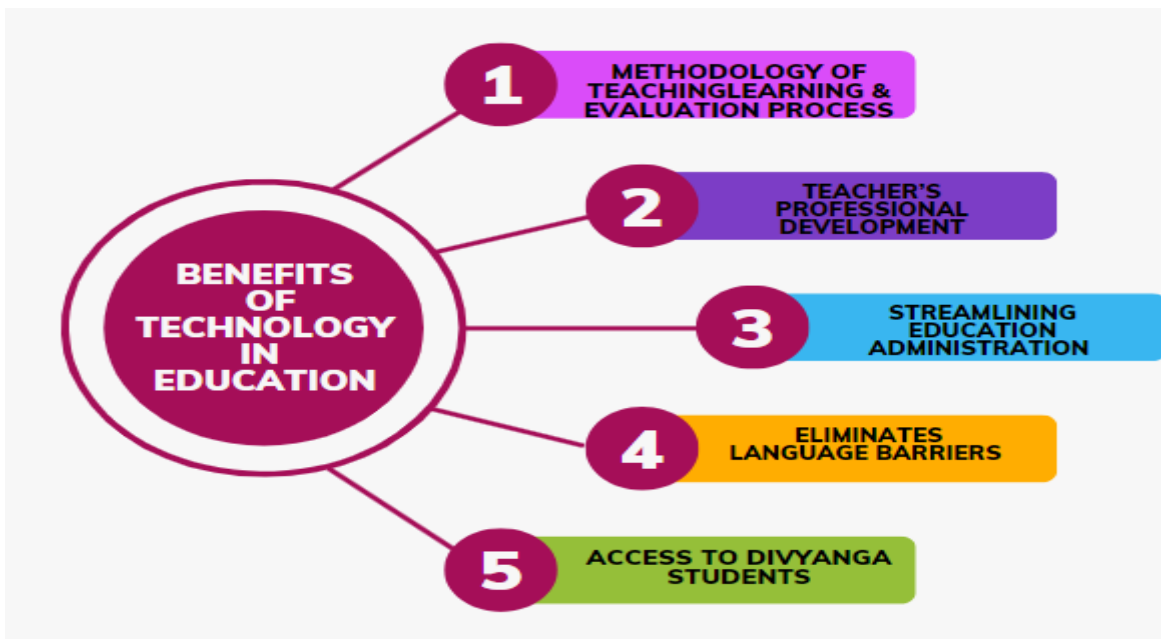
Figure 3: Facilitating Education through use of Technology

2. Challenges in Higher Education for execution in ICT

The implementation of the new NEP 2020 has introduced the digital realm to address numerous challenges in higher education. Within the domain of higher education institutions in the country, there exist various obstacles, including:

➢ Insufficient ICT lab facilities in higher education institutions.
➢ Inadequate or outdated hardware and software equipment.
➢ Untrained teachers and a lack of adequate resources for ICT instruction.
➢ Limited knowledge of ICT usage among students.
➢ Inadequate or inappropriate infrastructure for ICT-related facilities.
➢ Lack of individual attention in classrooms due to large student numbers.
➢ Insufficient financial support from both school management and the government.
➢ Weak Wi-Fi network connectivity within the institution.
➢ Unavailability of teaching materials for developing technical skills in using ICT devices.

These challenges highlight the need for concerted efforts to address infrastructure limitations, enhance teacher training programs, provide adequate resources, promote student proficiency in ICT, and secure financial support from relevant stakeholders. By tackling these obstacles, higher education institutions can effectively embrace the opportunities presented by the NEP 2020 and foster a more conducive learning environment.

3. Suggestions for effective implementation of ICT in Higher Education

It is widely acknowledged that ICT has the potential to empower teachers and learners, making a significant contribution to their learning and achievement. In light of this, the following suggestions can be considered:

o Teachers should possess comprehensive knowledge of digital devices and actively train students in the effective use of ICT tools.

o Adequate resources and funding should be provided by educational administrations and the government to facilitate the development of software and hardware facilities in all educational institutions.

o Maintaining an appropriate teacher-student ratio is crucial to ensure that students receive sufficient support in utilizing ICT tools for an enhanced teaching and learning experience.

o Educational institutions should actively engage with the broader society to promote the widespread adoption and integration of ICT.

o Collaboration between administrative bodies and higher education departments is essential in organizing ICT training courses for teachers, enabling them to stay updated with the latest technological advancements.

o Providing adequate internet access on campuses is vital for enriching the teaching and learning process through ICT utilization.

By implementing these suggestions, educational institutions can foster an environment conducive to the effective integration of ICT, empowering both teachers and learners to optimize their educational experience.

4. Conclusion

The introduction of ICT in education is founded on the recognition of the significance of personalized learning. NEP 2020 envisions the use and integration of technology to empower students, enabling India to become a digitally empowered society and a globally recognized knowledge-based economy. By incorporating ICT, education can reach individuals residing in remote areas of the country, promoting accessibility and inclusivity.

NEP 2020 emphasizes the value of applied learning, diverse learning pathways, and resource sharing. It acknowledges the pivotal role of teachers throughout the educational process, particularly in the context of ICT-enhanced education. The utilization of various ICT tools enhances the effectiveness of learning experiences. In this regard, technology holds a central position in transforming educational processes, a recognition that is appropriately highlighted in NEP 2020.By leveraging technology in higher education, NEP 2020 aims to drive significant advancements in the educational landscape, empowering learners, and fostering a holistic and inclusive learning environment.
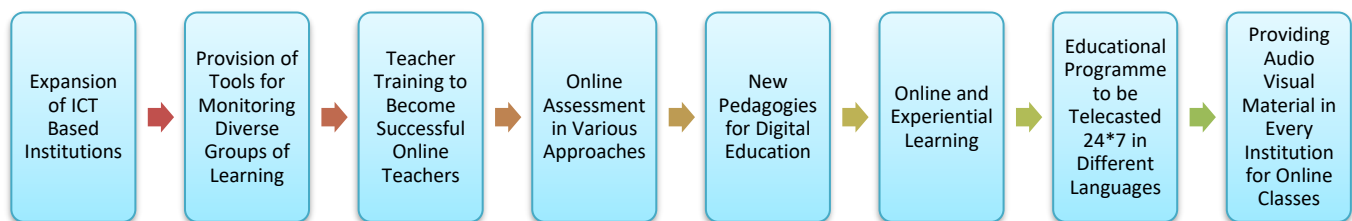

Figure 4: Way forward in digital education with the help of NEP

The success of NEP 2020 ultimately hinges on the effective implementation of its goals, requiring integration with existing initiatives and the active involvement of relevant stakeholders. The policy's implementation should involve a collaborative approach, engaging various entities to ensure its smooth execution.

NEP 2020 represents a significant stride in acknowledging the need for India's education system to remain at the forefront globally. Particularly for a country like India, which has historically relied on a traditional education system, the successful implementation of NEP 2020 would be an exceptional achievement.

To realize the full potential of NEP 2020, it is essential to address implementation challenges, develop a robust framework for execution, and actively involve educational institutions, teachers, administrators, policymakers, and other stakeholders. By doing so, India can effectively transform its education system and establish itself as a global leader in education.

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