National Education Policy 2020 for Open and Distance Learning Using ICT Technical and Vocational Education in Context of G20 Declaration

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Abstract

Education has experienced a paradigm shift as a result of the advent of Information and Communication Technology (ICT) and the spread of COVID-19. The New National Education Policy-2020 (NEP-2020) focuses on the significant use of technology in teaching and learning, reducing linguistic barriers, improving access, and education planning and management. ODL and ICT are viewed as tools of achieving fairness, access, and educational quality. The primary advantage of ICT in education is synchronicity, or "anytime, anywhere learning." This has brought in a new age of fresh hopes and new prospects for students' future benefits. This study examines several NEP-2020 provisions in ODL and their impact on establishing an enabling environment towards the ultimate goal of an Aatmanirbhar Bharat through huge push on ICT in the form of e-learning

Key Words: Aatmanirbhar Bharat, National Education Policy-2020, ICT, Open and Distance Learning

Introduction

Open and Distance Learning (ODL) programmes have risen in popularity and recognition as a flexible and accessible mode of education in recent years. ODL has become an integral component of the educational environment as a result of technology advancements and a rising need for lifelong learning. However, educators and institutions continue to face substantial challenges in sustaining the quality of ODL programming. Among the several areas of quality assurance, assessing and evaluating learning outcomes in ODL programmes stands out as a difficult and thorough task. Assessing and assessing learning outcomes is an essential component of any educational system since it allows students' knowledge, talents, and competencies to be measured. It provides valuable insights on the effectiveness of teaching and learning processes, enabling educators in identifying areas for improvement and making informed decisions about instructional strategies. Exams, projects, and presentations are common methods of evaluation in traditional face-to-face education. However, the unique characteristics of ODL provide substantial challenges in monitoring and evaluating learning outcomes. One of the most major issues in measuring and evaluating learning outcomes in ODL training is a lack of direct physical supervision. Unlike traditional classrooms, where instructors may monitor students' participation and performance in real time, ODL courses primarily rely on self-paced learning and remote communication. Because of the lack of physical presence, it is impossible to properly monitor and examine the growth of students. Educators must create alternative approaches and tools for accurately assessing learning outcomes while maintaining academic integrity.

The National Education Policy (NEP) 2020 is an educational policy in India that aims to transform the country's education system to meet the needs of the 21st century. It places significant emphasis on the use of technology, including Information and Communication Technology (ICT), in open and distance learning. Here are some key points related to open and distance learning using ICT in the NEP 2020.

National Education Policy-2020

The National Education Policy, 2020, was issued by the Ministry of Human Resource Development. The Policy covers a broad variety of topics, including the significance of providing for young children, ensuring that all students have access to quality education, and updating the current curriculum, but the relationship between education and technology is a consistent theme throughout. The Union Cabinet of India adopted a new education policy on July 29, 2020, making it one of the most significant education initiatives of the twenty-first century. The 2020 NEP emphasised the use of technology in education. E-courses in regional languages will be developed, virtual laboratories will be constructed, and a National Educational Technology Forum (NETF) will be established. The policy focuses on a variety of areas, including the use of ICT in classrooms, and represents a radical departure from past approaches. The policy comprehensively encompassed all levels and types of education, from early childhood to higher education to professional and technical training, with input from

India's rich and diverse historical past and the insights of numerous experts. The end objective of these policies is to provide every citizen with access to a well-rounded, liberal education in a variety of disciplines; consequently, they outline distinct phases of schooling (Aithal & Aithal, 2020) [1]. Policy and technological integration present obstacles that the federal government and the states must surmount through collaboration. We have a long way to go in terms of technological advancement. The New Education Paradigm 2020 is anticipated to be the century's most comprehensive educational initiative. Technology in Higher Education Internet and computer technology applications can provide a competitive advantage by enhancing services for students and staff, generating more observable efficiencies, and improving learning interactions and experiences. One of the many applications of Internet and computer technology (ICT) is in the educational sector. The importance of a quality education cannot be emphasised. The pursuit of a quality education can significantly increase a person's prospects of achieving success in life, despite inherent disadvantages. Education's ability to combat poverty is so widely acknowledged that it is frequently cited as a key tactic in this ongoing struggle. Therefore, it is the duty of every educator to provide an exceptional education. ICT has numerous applications in the academic realm. Some applications may benefit both the administration and the students. The term "information" is used to designate any variety of knowledge representation, including but not limited to words, images, and stories. As a result of advances in information and communication technology, the ways in which we communicate with one another, share information, and acquire new skills are evolving, making their use a matter of personal preference. Information and communication technologies will play a crucial role in the near future because they will pervade every aspect of human existence.

Uses of ICT in Higher Education

Information and Communication Technology (ICT) plays a crucial role in higher education by enhancing the teaching and learning process, improving administrative functions, and providing students with tools for academic success. Here are some specific uses of ICT in higher education:

Online Learning Management Systems (LMS): LMS platforms like Moodle, Blackboard, and Canvas are used to deliver course content, assignments, and assessments. They provide a centralized platform for students and instructors to access course materials, engage in discussions, and submit assignments.

E-Learning Resources: Higher education institutions create and share digital learning resources such as e-books, interactive simulations, video lectures, and multimedia presentations. These resources complement traditional classroom instruction and enable self-paced learning.

Massive Open Online Courses (MOOCs): Universities offer MOOCs on platforms like Coursera and, allowing students to enrol in courses from top institutions worldwide. MOOCs provide access to high-quality education to a global audience.

Virtual Classrooms: Video conferencing and virtual classroom tools (e.g., Zoom, Microsoft Teams) enable remote and synchronous learning. Professors can conduct live lectures, host discussions, and facilitate group projects online.

Online Assessments: ICT facilitates online assessments, including quizzes, exams, and assignments. Automated grading and plagiarism detection tools streamline the grading process and enhance academic integrity.

Research Tools and Databases: Students and researchers have access to digital libraries, academic databases (e.g., JSTOR, PubMed), and research software for literature reviews, data analysis, and scholarly research.

Collaborative Tools: Collaboration platforms like Google Workspace (formerly G Suite) and Microsoft 365 facilitate collaborative document editing, project management, and communication among students and faculty.

Learning Analytics: Higher education institutions use learning analytics to track student performance and engagement. Data-driven insights help educators identify at-risk students and tailor interventions.

Mobile Learning: Mobile apps and responsive websites provide students with access to course materials and resources on smartphones and tablets, allowing for learning on the go.

Virtual Reality (VR) and Augmented Reality (AR): VR and AR technologies are used in fields like medicine, engineering, and architecture to provide immersive learning experiences and simulations.

Administrative Systems: ICT streamlines administrative functions such as admissions, registration, billing, and academic records management through Enterprise Resource Planning (ERP) systems.

Digital Credentialing: Institutions issue digital badges and certificates that can be easily shared and verified online, making it simpler for students to showcase their qualifications.

Cybersecurity: Higher education institutions invest in cybersecurity measures to protect sensitive data and ensure the privacy and security of both students and faculty.

Online Support Services: ICT enables virtual counselling, tutoring, and academic advising services, ensuring that students have access to support resources even when learning remotely.

Professional Development: Faculty and staff participate in online training programs and workshops to enhance their ICT skills and pedagogical knowledge for effective teaching.

Virtual Labs: Students in science and engineering fields can access virtual labs for conducting experiments and gaining practical experience remotely.

AI and Machine Learning: Institutions use AI-powered tools to personalize learning experiences, recommend courses, and provide automated support for student inquiries.
Overall, ICT in higher education enhances accessibility, flexibility, and the quality of education. It empowers students to take control of their learning, facilitates research and collaboration, and improves administrative efficiency for educational institutions.

NEP-2020 in Open and Distance Learning
Digital Infrastructure: The NEP 2020 recognizes the importance of creating a robust digital infrastructure to support open and distance learning. It aims to provide universal access to quality education through the extensive use of digital resources and technology.

Online and Digital Resources: The policy encourages the development and dissemination of high-quality, interactive, and multimedia digital content for open and distance learning. This includes the creation of digital textbooks, e-learning materials, and open educational resources (OERs) to make learning more engaging and accessible.

Virtual Labs: NEP 2020 promotes the establishment of virtual labs in various disciplines, allowing students to conduct experiments and gain practical experience through online platforms. This helps bridge the gap between theory and practice in distance education.

Digital Platforms: The policy supports the development of user-friendly digital platforms and learning management systems (LMS) to facilitate online learning and collaboration. These platforms can serve as hubs for course content, assignments, assessments, and communication among students and educators.

ICT Training: NEP 2020 emphasizes the need for training teachers and instructors in the effective use of ICT tools and platforms. It recognizes that well-trained educators are essential to delivering quality open and distance education.

Online Assessment: The policy encourages the use of technology for conducting fair and secure assessments in open and distance learning. This includes online examinations, quizzes, and continuous evaluation methods.

Flexibility and Choice: NEP 2020 promotes flexible learning pathways, allowing students to choose from a variety of courses and programs through open and distance education. This flexibility is essential for learners with diverse needs and backgrounds.

Credit Transfer: The policy supports credit transfer mechanisms between conventional and open/distance education systems. This enables students to switch between modes of learning without losing academic progress.

Quality Assurance: NEP 2020 emphasizes the importance of maintaining high-quality standards in open and distance education programs. Accreditation and quality assurance mechanisms are to be put in place to ensure that learners receive a valuable education.

Research and Innovation: The policy encourages research and innovation in open and distance education, particularly in the development of new ICT-based learning technologies and methodologies.

The National Education Policy 2020 recognizes the transformative potential of ICT in open and distance learning and seeks to leverage technology to make education more inclusive, accessible, and effective for learners across India. It envisions a future where learners can access quality education anytime, anywhere, with the help of digital resources and online platforms.

Conclusion

The recognition of Open and Distance Learning (ODL) as a mainstream delivery modality is considered a fundamental principle of the National Education Policy (NEP) 2020. The shift from conventional to digital learning has been shown to occur seamlessly. Online education has become increasingly accessible to students and instructors due to the use of social media and other technological advancements. The significance of Open and Distance Learning (ODL) in the current and next education and training system is indisputable. Open and Distance Learning (ODL) has a significant position, particularly for individuals who would otherwise be unable to pursue higher education due to various constraints, including health-related concerns. In the foreseeable future, Open and Distance Learning (ODL) is poised to become an integral aspect of individuals' lives. The need of this matter has beyond mere choice. Utilising contemporary technological advancements, it is imperative for the government to establish comprehensive outreach initiatives aimed at ensuring universal access to fundamental resources such as water, shelter, and education for all students

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