



THE DIGITAL ERA OF HIGHER EDUCATION IN INDIA

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INTRODUCTION

Technological innovation is a multifaceted endeavour that shapes and reshapes culture through physical and mental exertion to achieve specific goals. It can have profound implications, including the potential for political authoritarianism and conflict. Microchips have revolutionized human-machine interactions, enabling functions such as counting, memorization, symbol recognition, and command response. The Internet has transformed communication, facilitating rapid global connectivity and access to information.

The proliferation of digital devices is transforming how students learn and allocate their time between educational and leisure activities. Specifically, tablets and personal computers empower students and are associated with their digital well-being. However, integrating digital devices into Indian school curricula remains a challenge due to limited adoption in Indian schools. Understanding students' digital device usage patterns after school hours is essential for gaining insights into their study habits. The affinity that students develop for their electronic devices not only aids them academically but also provides relaxation opportunities.

This strong bond with electronics helps reduce academic workloads, while multitasking enables students to save time and create free time. Consequently, the Indian government has initiated the "Digital India" campaign to harness the benefits of digital technologies.

The ACRL Research Review and Planning Committee (2018) conducted a study on developments in higher education, focusing on the influence of market forces, technology, and the political climate on various aspects including libraries, open education resources, research datasets, and data science. Libraries are adapting to these changes to better serve their users' needs.

LITERATURE REVIEW

- **Kumar and Raur (2005)** investigated internet usage among students and instructors at the Punjabi Engineering College, employing a structured questionnaire distributed to 960 participants across various engineering institutions. Their findings underscored the internet's pivotal role in teaching, research, and learning processes, highlighting its superiority over traditional paperwork.
- **Atakan et al. (2008)** examined the Ankara University digital library's evolution by comparing the knowledge level of academic staff through surveys conducted in 2002 and 2005. Consistent positive outcomes in both surveys underscored the progressive advancement of digital library resources.
- **Tikeka (2009)** explored the modernization of Indian university and college libraries in the latter half of the twentieth century, emphasizing the University Grant Commission's contributions towards infrastructure development and digitalization efforts.
- **Gnaldi and Sarto (2017)** emphasized the significance of leisure activities and internet engagement among youth. Their study revealed a preference for socializing and recreational pursuits over technology usage among youngsters.

India's Higher Education Growth

Higher education is crucial for advancing knowledge and intellectual endeavours. Under British control, India's university system developed and opened the way for western liberal education. Independence, industry, and self-reliance were the primary policy goals and activities in higher education. The radical reformation of education with standards and values was the main emphasis of the Radhakrishnan Commission (1948–49) and Kothari Commission (1964–1966). The state's funding allotment was reduced throughout the 1980s, which had an effect on the operations and procedures of higher education.



The 1990s saw the marketization and commodification of higher education, which raised concerns about its quality, responsibility, and accountability. Several reports, like the Asphalt Committee Report (1994), the National Knowledge Commission (2006), and the Gnanam Committee Report (1994), addressed this in 2009. These studies established the basis for India's educational system and described how to enhance it and lay the groundwork for a powerful country.

The GOI formed the Radhakrishnan Commission to recommend improvements to the Indian education system. It defined colleges as places where people may develop their inner selves and gain intellectual and creative understanding. It highlighted teachers' roles and responsibilities, as well as the need for research-based education. It also underlined the importance of teachers' autonomy and independence in the operation of universities, as well as the importance of ethics and value formation as instructors' responsibilities.

To suit social and economic requirements, education is a dynamic process that has to be restructured and reformatted. In order to develop an all-encompassing education strategy with a quality-oriented focus, the Kothari Commission was established in 1964. The Commission stressed the necessity of changing the hierarchical system of governance and granting universities more autonomy and responsibility. The Kothari Commission called for a revolution in education with an emphasis on quality and emphasised the significance of education in terms of development, welfare, and advancement.

Decentralization, market-based incentives, competition, quality, and accountability were suggested by the National Knowledge Commission as ways to preserve personal freedom and autonomy. The National Knowledge Commission has advocated reorganising higher education institutions, developed interdepartmental national universities, and imposed national standards for vice chancellors and governing bodies. These changes are required to create high-quality, competitive, and accountable higher education. To assure the quality of higher education, NCK advised accreditation and assessment of institutions, the admission of private universities, enhancing institutional procedures and mechanisms for accountability, and strengthening governance.

The Yashpal Committee proposed that affiliated institutions be given more autonomy and periodically evaluated for their standards and accountability for academic performance through outside organizations. With centralised decision-making and minimal faculty and student input, university governance in India is antiquated, dogmatic, and poorly regulated. The importance of autonomy and responsibility must be emphasised if the quality of higher education is to improve. When it comes to the constructivist approach to learning, teachers should be allowed liberty and held accountable, and curriculum reform should promote their participation.

Digitization Concept

Digitization is the process of converting analogy signals or data into a digital format, enabling computers and electronic devices to interpret them. This transformation facilitates the storage, retrieval, and transmission of binary codes, which represent various types of information such as text, images, voice, and sounds. The pervasive integration of digital technology into daily life is often referred to as the "digitalization of everything that can be digitized." This societal shift reflects a dependence on technology, reshaping numerous aspects of human existence around digital media and communication infrastructure.

In the realm of education, the impact of digitalization has been profound. Before the advent of technologies like overhead projectors and translucent sheets, incorporating technology into the classroom seemed implausible. However, these innovations have empowered educators to update content effortlessly, allowing for organized presentation and immediate projection of material. The transition from physical to virtual classrooms has emphasized active participation over passive learning, enabling students to access information remotely through digital platforms such as email, online forums, and video conferencing. This evolution has transformed the learning environment, fostering focused and creative learning experiences.

Research indicates that integrating modern digital technology into teaching enhances students' comprehension and retention of information. Institutions of higher education play a critical role in bridging knowledge creation and dissemination while preparing professionals for the workforce. Initiatives like the Digital India Plan have incentivized higher education institutions to embrace digitalization, fostering the adoption of innovative technologies. Moreover, the concept of Green-ICT promotes environmentally responsible computing practices, aligning with national missions such as Green India. By implementing Green-ICT strategies, higher education institutions can not only achieve cost savings but also contribute to energy conservation and sustainability, benefiting a range of development projects.



While the benefits of digitalization and Green-ICT are evident, the implementation of these initiatives in higher education institutions faces challenges. Influencing staff behaviour and overcoming obstacles require strategic planning and commitment. Nevertheless, the potential long-term benefits make it imperative for institutions to prioritize and invest in digitalization and environmentally sustainable practices. Through these efforts, higher education institutions can enhance their effectiveness, relevance, and contribution to society.

Discover India's Digital Higher Education Era Of 21st Century

The Digital India initiative, spearheaded by Prime Minister Shri Narendra Modi, seeks to revolutionize education by integrating cutting-edge technology into classrooms nationwide. One of its key components, the National Fibre Optical Network (NFON), aims to provide free Wi-Fi and high-speed fiber optic connections exceeding 100 Mbps to each of the country's 250,000 educational institutions. This ambitious endeavour forms part of a comprehensive strategy to modernize services, communication, and technology across India.

The impact of this digital revolution extends beyond mere connectivity – it reshapes the very fabric of education itself. Tablet computers, for instance, facilitate an explosion of knowledge sharing and academic engagement, fostering a dynamic learning environment for students nationwide. By envisioning a future where each student has access to their own digital device, we can reimagine pedagogical approaches and bridge the gap between developed and underdeveloped areas through paperless education.

The commendable efforts of Prime Minister Modi in advancing the Digital India agenda have garnered international recognition, particularly from technology hubs like Silicon Valley in the United States. This recognition underscores the transformative potential of digital initiatives in India's educational landscape.

The implementation of Digital India encompasses various approaches, including equipping classrooms with standardized devices or embracing a BYOD (Bring Your Own Device) model. Furthermore, the initiative aims to provide broadband access to rural communities and Wi-Fi connectivity in classrooms, thereby democratizing access to information and fostering digital literacy among students.

Digital technologies have already begun to revolutionize learning in educational institutions, optimizing time management, enhancing attendance tracking, and providing instant feedback to students. Moreover, higher education institutions are increasingly leveraging digital tools such as video conferencing, online courses, and blended learning to cater to diverse student needs and improve enrolment rates.

In the context of India's ambitious goal to achieve developed nation status by 2022, the integration of digital technology in higher education assumes paramount importance. It is imperative to equip stakeholders with essential computer and information technology skills to navigate this digitized landscape effectively.

By harnessing digital tools for educational administration, teaching-learning processes, assessment, research, and extension activities, higher education institutions can adapt to the evolving needs of global learners and contribute significantly to India's journey towards development.

In conclusion, the digitization of education in India heralds a new era of innovation and accessibility, transforming educational institutions into dynamic hubs of learning fit for the challenges of the 21st century. As we embrace this digital revolution, we pave the way for a brighter, more inclusive future for generations to come.

Government Of India's Digital Education Initiatives-

- **SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds)** is an indigenously designed massive open online course (MOOC) that was launched on July 9, 2017 with the goal of "bridging the digital divide for students who have hitherto been untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy." It conducts online courses free of cost for the Indian nationals to provide "excellent teaching learning resources to all". All courses taught at universities, colleges, and schools from 9th grade to post-graduate level are virtually available here; there are currently 438 online courses registered on the SWAYAM portal. It is intended to achieve the three cardinal educational principles of equity, access, and excellence. During its early phase, faculty from national important institutes like as IITS, IIMS, and central universities, as well as faculty from overseas universities, offer courses in engineering, social science, energy, management, basic sciences, and so on.
- **SWAYAM Prabha**, another digital education programme launched in 2017 alongside SWAYAM, promises to give high-quality educational information to learners by utilising satellite technology to reach the



unreached. Experts create educational content that covers a wide range of areas in a variety of languages and educational levels. It is distributed by 32 SWAYAM Prabha DTH (direct to home) Television Channels with the goal of bringing uniformity in educational standards, particularly in rural and isolated areas of the country that lack penetration of digital and information technology infrastructure.

CONCLUSION

Technological innovation is reshaping education, offering new opportunities for learning and knowledge dissemination. The Digital India initiative and Green ICT practices are pivotal in advancing educational quality and sustainability. By embracing digital technologies and fostering digital literacy, India's higher education sector can thrive in the 21st century and contribute to the nation's development goals. and global competitiveness.

In conclusion, the digitization of education in India marks a pivotal shift towards innovation and accessibility, heralding a transformative era for educational institutions across the nation. Spearheaded by initiatives like the Digital India campaign and bolstered by programs such as SWAYAM and SWAYAM Prabha, this digital revolution holds the promise of levelling the educational playing field and revolutionizing pedagogical approaches.

The impact of these initiatives extends far beyond mere connectivity; they fundamentally reshape the very fabric of education itself. By providing free access to high-speed internet and educational resources, such as the vast array of courses available on SWAYAM, previously marginalized students are empowered to join the mainstream of the knowledge economy. Furthermore, initiatives like SWAYAM Prabha, with its utilization of satellite technology to deliver educational content, ensure that even remote and rural areas have access to quality educational materials, thereby bridging the urban-rural divide.

The adoption of digital tools in classrooms and higher education institutions has the potential to revolutionize learning outcomes. By facilitating dynamic, interactive learning experiences, digital technologies empower students to engage with educational material in new and innovative ways. Moreover, they enable educators to tailor their teaching methods to suit diverse learning styles, fostering a more inclusive learning environment.

As India strives to achieve developed nation status by 2022, the integration of digital technology in higher education assumes paramount importance. By equipping students and educators with essential computer and information technology skills, India can effectively navigate the challenges of the 21st century. Additionally, the digitization of educational administration processes, research activities, and extension programs enables higher education institutions to adapt to the evolving needs of global learners.

In essence, the digitization of education in India represents a paradigm shift towards innovation, inclusivity, and excellence. By harnessing the power of digital technology, India is laying the groundwork for a brighter, more prosperous future for generations to come.

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