

A Critical Evaluation Of The Effects Of Technological And Digitization On Indian Learning And Education

Janne Umapathi^{1*}, Dr. Vishal Khatri²

Abstract

The recent trend and need for all learners or students to be more focused on their studies is digital education. Digital education makes acquiring information simpler and more diversified than ever previously for students and learners. It also reduces the period of time required to comprehend anything new. Historically, schools, teachers, and print media have been the principal sources of education. Students had the ability to acquire information sources by identifying with schools, instructors, and libraries. Before the online era, the vast majority of individuals lacked access to information and those who did were unable to obtain current information. This study's primary objective is to investigate the technology's impact and digitalization on education and education in India in a brief manner. In this study, a survey questionnaires approach was utilised. Based on the results of this study, educational delivery at universities and colleges will undergo significant changes in the next years. This rapid use of electronic technologies in education and evaluation isn't a passing fad; it will have lengthy consequences that will form the new standard of the future. Digital education will create a wealth of options to educate India's young in the coming future.

Keywords: Digitization, Information and Communication Technology, Education, Technology, Learning.

INTRODUCTION

As a result of technology integration, numerous new educational opportunities have emerged. Information might now be accessed or transmitted by any group of people from any location. Understanding that universal education is crucial for rapid development, the government has created a fresh National Education Policy (NEP) that stresses digitisation and technology use in education. It also emphasises the use of edtech to enhance education, particularly in rural regions. This was mainly carried out to ensure that all regions of the country had access to a decent education, notably in Tier two and Tier three cities. The government has realized that technology had the capacity to reach rural areas and provide qualified teachers. This was once a far-fetched vision, but widespread technology disruptions have made the previously unimaginable endeavour a reality (Shenoy, et al. 2016). By bringing an end to traditional methods of instruction and issues such as teacher shortages, inadequate student-teacher ratios, and inadequate teaching assets, digitisation in learning has opened the door for the most modern teaching techniques and tools to social change and social in even the most remote areas of the country. With inclusive education as one of the govt's goals, the remote teaching approach is most likely to succeed (Rastogi, 2019). It's a virtual network for educators across the country that helps them to stay abreast of cutting-edge digital technology even while incorporating digital elements into their daily lives (Ugur 2020). Exams are now administered online, in accordance with current educational trends. Digital systems offer customised exams, online proctoring, and certification, as well as secure, scalable, and reliable distant exams. These web-based computerised examinations have

^{1*}Research Scholar, Department of Computing and Information Technology, Himalayan University, Itanagar, Arunachal Pradesh, INDIA.

²Research Guide, Department of Computing and Information Technology, Himalayan University, Itanagar, Arunachal Pradesh, INDIA.

various benefits, including cost reductions, time savings, a wider reach, and a high level of security. This is due to the fact that the process lowers human, technical, infrastructure, and logistical costs, as well as spent time planning, coordinating, and producing outcomes. With no geographical restrictions, the platform can manage a significantly larger application pool while assuring strict content spillage and impersonation avoidance for each candidate (Hans, et al. 2019).

LITERATURE REVIEW

Emerging technologies (ETs) are transforming many aspects of the learning process, including teachers' job, information content, methodologies, class involvement, and review. Incorporating new technologies into the teaching and learning process boosts class participation and student achievement. Despite the benefits of technology advancements, their incorporation into the teaching process is frequently delayed by a number of obstacles that affect the consolidation of knowledge (Onyema, 2020).

According to (Nawaz, 2012), big data would be utilized in education to enable "interactive 3d" encounters, which have been described as leveraging mobile computers to push the virtual age into reality, resulting in connection and communication simulators. Businesses utilize machine learning or robots to automate routine and repetitive tasks, as well as to make difficult decisions more quickly and precisely. Introducing technology advancements into teaching-learning activities has the potential to increase students' productivity, but it requires the use of instructional strategies. Oliveira et al. (2019) conducted a study on innovative technology scientific education training.

Many other studies have been done in the field of education (Shrivastava et.al., 2021; Saxena et.al., 2021; Dutta et.al., 2021). According to the survey, emergent technology artefacts such as computational approaches, virtual labs, tablet devices, robots, gaming, or digital imagery and drawings are broadening the perspective of learners. According to (Sosa et al., 2017), "Technological factors in learning: A comprehensive review of literature published between 2006 and 2016". (Rupali, et al., 2018) assert that technology plays a significant part in trying to render educational video games more valuable, and is therefore one of the most efficient strategies for attempting to advance expertise and knowledge. According to the findings of a study on the obstacles to systematic disenfranchisement, efficacious, and protracted system integration in schools, the three biggest obstacles to the system's long-term effectiveness are: (1) colleges do not take advantage of the opportunity to analyze their accurate data; (2) universities should not use data to create improvements; and (3) restricted access to digital. Academics currently strive to master all innovations; the more web 2.0 tools they master, the better academic environments they can create. In addition, it introduces security concerns, primarily in terms of web-based grading, and deviates education away from the core audience (Başal et al., 2021). The theories that explain its structure are also critical. A few of the requirements for professors in the twentieth centuries is really the ability to successfully incorporate instructional techniques within teaching approaches (Hans, et al. 2019). Despite massive investments in education technology, teachers may lack training in the integration of technology and educational efficacy. Lastly, as a result of the interplay of modern technologies, it is challenging to create an approach that can adapt to a changing situation in computer economic cooperation (Iorait et al., 2021).

METHODOLOGY

This study's methodology is as follows:

RESEARCH DESIGN: Both secondary and primary sources will be employed to collect the data. To acquire the primary data, a survey will be employed. Journal and scholarly articles will serve as secondary data sources.

SAMPLE SIZE AND SAMPLING TECHNIQUE: The sample size is the number of individuals selected out of a sample population in order to collect primary data on the topic of interest. On the basis of many questions among students in the relevant regions, the required real-time data was gathered. In this study, 283 students' responses were examined. Everyone uses the Internet at various

times. Google form questions will be delivered to the sample population indicated. To eliminate the possibility of bias and ensure the accuracy of the findings a randomly selected technique will be employed to select the sampling population.

RESULTS AND DISCUSSIONS

Traditional teaching methods, like drawing on the board using chalk or even a white board marker, are still favoured by many teachers in our country, according to the survey. However, our pupils have different perspectives. Maximum satisfaction among pupils is 95,4 percent when digitalization technologies are utilised in the classroom. Only 4.6% of students remained unhappy with their education. The most of our learners are adjusting to and appreciating digitisation, as indicated by this survey. Therefore, our instructors should keep this in mind when designing their coursework.

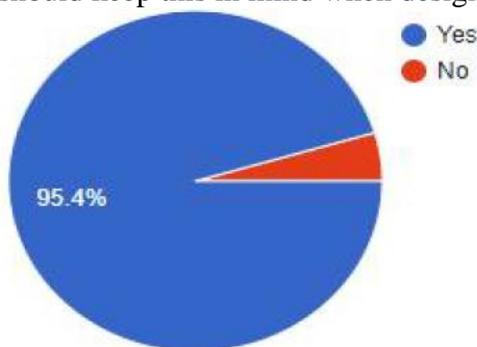


Figure 1: Effectiveness of digitalization

to uncover an additional aspect of the influence of digitization technologies in the classroom. The answer varied based on the ratio of happy to sad individuals. Based on the author, 83.4% of students believe that digitalization has a positive impact on the classroom, while 16.6% think that standard schooling is neither good nor bad. In this section, it was determined that student perceptions on digital in the classroom vary. Some children have no idea how to utilise digital devices for educational purposes.

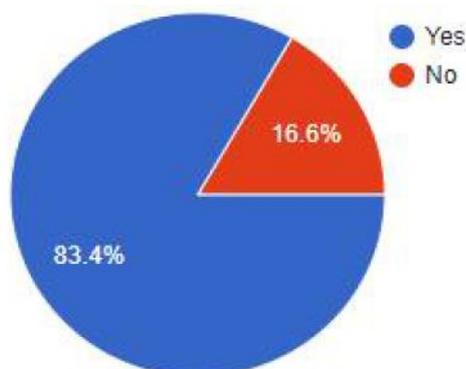


Figure 2: Digitalization effect on classroom study

E-learning is a pioneering method to learning, according to this poll. Both teachers and students must adapt to the shift from traditional classroom strategies to a new paradigm of education. Even though today's youth are technologically savvy, the usage of technology in the classroom can be daunting and cause students to lose interest. Students on both ends can now excel in these e-learning settings with the necessary assistance from their teachers.

CONCLUSION

In recent years, India's system of education has experienced a series of dramatic expansions that have helped transform the country into a refuge for knowledge. According to the report, the adoption of

digital education at every level requires a change in young development. Consequently, academic facilities investment will increase significantly. For the development of e-learning in Indian society, effective politics, gadget-speaking individuals, and a legal industrial private ownership climate are essential. In addition to the construction of new IITs as IIMs and the provision of instructional funding for research scholars at the majority of government agencies, the Indian government is taking significant steps to improve the country's technological institutions. Thirdly, and perhaps most importantly, the instructor will emphasise the course's overall characteristics. As a result of digital education, universities and colleges will give education in a significantly different manner in the next years. This rapid use of digital technologies for both educational access and assessment is not a fleeting fad; it will have long-lasting effects that will form the new standard of the future. Digital education will soon create an abundance of options to empower India's youth.

REFERENCES

- Onyema, E. M. (2020). Integration of emerging technologies in teaching and learning process in Nigeria: the challenges. *Central Asian Journal of Mathematical Theory and Computer Sciences*, 1(1), 35-39.
- Nawaz, N. (2012). To assess the impact of HRIS in facilitating information flow among the select software companies in Bangalore, India. *Research Journal of Management Sciences*, 1(3), 1-8.
- Oliveira, A., Feyzi Behnagh, R., Ni, L., Mohsinah, A. A., Burgess, K. J., & Guo, L. (2019). Emerging technologies as pedagogical tools for teaching and learning science: A literature review. *Human Behavior and Emerging Technologies*, 1(2), 149-160.
- Sosa, E., Salinas, J., & De Benito, B. (2017). Emerging technologies (ETs) in education: A systematic review of the literature published between 2006 and 2016. *International Journal of Emerging Technologies in Learning*, 2017, vol. 12, num. 5, p. 128-149.
- Rupali, S., Hemant, G., Shoaib, K., Aaditya, I., & Deep, D. (2018). IOT based greenhouse monitoring system. *International Journal for Research in Applied Science and Engineering Technology*, 6(4), 2084-2085.
- Başal, A., & Eryılmaz, A. (2021). Engagement and affection of pre-service teachers in online learning in the context of COVID 19: engagement-based instruction with web 2.0 technologies vs direct transmission instruction. *Journal of Education for Teaching*, 47(1), 131-133.
- Išoraitė, M., & Gulevičiūtė, G. (2021). A study of online entrepreneurship education under conditions of a pandemic. *Entrepreneurship and Sustainability Issues*, 8(3), 179.
- Jha, N., & Shenoy, V. (2016). Digitization of Indian education process: A hope or hype. *IOSR Journal of Business and Management*, 18(10), 131-139.
- Hans, V. B., & Crasta, S. J. (2019). Digitalization in the 21st Century—Impact on Learning and Doing. *Journal of Global Economy*, 15(1), 12-24.
- Rastogi, H. (2019). Digitalization of education in India—An analysis. *International Journal of Research and Analytical Reviews*, 6(1).
- Ugur, N. G. (2020). Digitalization in higher education: A qualitative approach. *International Journal of Technology in Education and Science*, 4(1), 18-25.
- Geeta Shrivastava., & Mamta Rani (2021). HISTORICAL PERCEPTION AND RIGHT TO EDUCATION SYSTEM TO ENHANCE THE QUALITY OF EDUCATION IN INDIA. *international journal of grid and distributed computing*.
<http://sersc.org/journals/index.php/IJGDC/issue/view/303>.
- Deepshikha Saxena, & Pratyusha Biswas (2021). EVALUATION OF PARENTS PERCEPTION ABOUT THEIR TEENAGE CHILD BEHAVIOUR AND THEIR PARENTING ISSUES FOR INFORMAL EDUCATION. *Vidyabharati*.
<http://viirj.org/specialissues/2021/SP2110/Part%206.pdf>.
- Jadab Dutta, & Anuradha Yadav (2021). A DESCRIPTION ON SOCIALIZATION AND EDUCATION OF PEOPLE WHO ARE CHALLENGED MENTALLY. *Vidyabharati*.
<http://viirj.org/specialissues/2021/SP2110/Part%206.pdf>.