



DIGITAL TRANSFORMATION IN HIGHER EDUCATION IN INDIA

Dr. Durga Tripathi

Assistant Professor

Prism school of Business and entrepreneurship

Abstract

Today we are living in the age of science and technology and education is the powerful weapons to win whole worlds. For that digitalization in education is must. The term "digitization of education" refers to the use of digital technology, such as Android, computers, the internet, software apps, and other technologies, to educate students of all ages. In the present chapter we analyses the effect and impact of transformation of digitalization in education sector for higher education. And what is benefit of this type of changes in education, and the program run so far will also be reviewed as to how much it is benefiting the students.

Key words: Digitalization, Higher education, Digital Transformation

Introduction

Education

"Education is a never-ending search for knowledge and illumination. The institution must provide instruction that is driven by its mission and core values.

APJ Abdul Kalam,

The transmission of wisdom, knowledge, creativity, invention, and original ideas from one generation to another at any time and wherever is referred to as education in the modern world. The usage of digital technology has caused.

Digitalization

Digitization, according to Wikipedia, is the process of turning information into a digital format. The output is a representation of an object, an image, a sound, a text, or a signal that is created by producing a string of numbers that describe a discrete collection of points or a sample.

The Gen Y generation of today appears to have grown up around technology. A world without the internet is now unimaginable to students because it has become so ingrained in their daily lives. The 'plugged-in' Gen Y is unafraid of technology. It sees technology as an enabler. This generation has distinct expectations from past populations since their way of life are so closely entwined with the new digital offerings. Examples include expecting one click responses to their search queries, greater continual connectedness, and quicker cooperation. It conserves a great deal of the time and effort used in the conventional classroom.

Digital Transformation in Education

The term "digitization of education" refers to the use of digital technology, such as Android, computers, the internet, software apps, and other technologies, to educate students of all ages. The entire educational sector is affected by the broad shift known as "digital transformation," which is the application and utilization of digital technology by an establishment to create new or alter existing processes, services, and products.

According to NCERT, the Digital India campaign has created an environment that is favorable to the transition to digital education. The Ministry of Human Resource Development's (MHRD) recent introduction of PM e-Vidya, a nationwide campaign that will coordinate all initiatives relating to online education, it includes IITPAL, TV (one class-one channel), SWAYAM (online MOOCS on multiple courses), and DIKSHA (one nation, one digital platform).

(exam preparation site), AIR (through community radio), and CBSE Shiksha Van, NIOS has created educational resources (including a podcast) for students with disabilities.

In a methodical and coordinated manner, fields of e-learning must be broadened and developed further.

provided by the MHRD in a gradual fashion digital translation learners

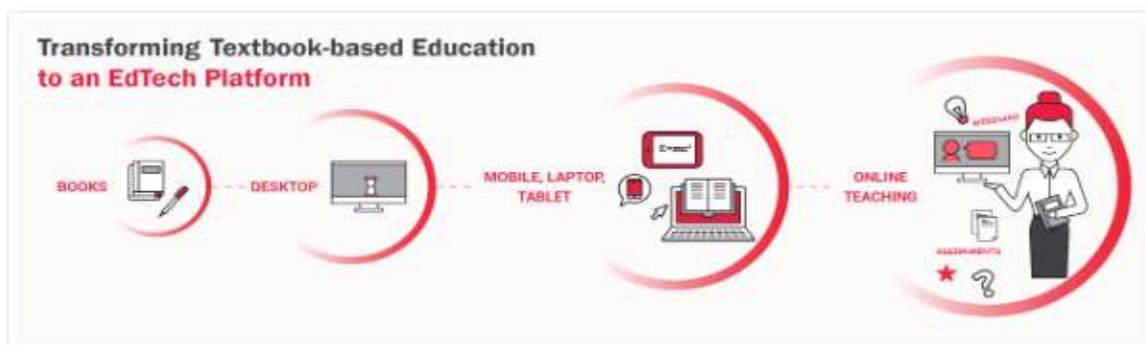


Fig :01 www.eyemagnett.com/services/digitization

Since digitization is present everywhere, education will soon be a reality. Information conversion into digital form is a process that improves communication and distribution of all kinds.

Learners can improve their knowledge through simple, quick, easy, fascinating, creative, and inventive learning with the support of digital skills. The goal of digitalized education is to educate everyone on the planet and prepare them to earn a living, so they can advance not only personally but also their family, society, and country. A survey report impact on improvement in achievement at initial level of 4.75% girls of high school who excellent in math. Improved scientific progress for boys, both average and high achievers, and improved English learning outcomes for both average and high achievers.

According to a research report on India's economy from 2022, Edtech companies will make sure that students thrive and that learning is uninterrupted. The confederation of Indian industry claimed that despite their lack of enthusiasm, teachers, students, and their parents accepted the several benefits that Edtech provided, such as the ability to set their own schedules, personalized study materials for each student, and the ability to continue learning even during pandemics.

Same example of digital platform i.e.

WEB 1.0 to WEB 3.0

Due to the substrate digitization of education, changes and advancements in all learning methodologies have occurred. As a result, online collaboration between learners sitting in various locations and at various times allows them to collaborate at a time that is convenient for both parties, and whatever they produce is shared. But as fresh inventions and innovations grow thanks to the cooperation of the instructional materials, the student is also inspired to try something new. Cyber bullying does occur occasionally (Negi and Kanvaria, 2019).(adopted by <https://books.google.co.in/>)

According to Killedar and Shantikumar's (2008) study, web technology has significantly altered India's educational system, although more than 80% of students are still educated in traditional classroom settings. The advent of digital transformation has made it feasible to learn from the best mentors through electronic media.

Massive Open Online Course (MOOC)

MOOC is the online learning course which is run at a mass level with the help of open courses providing free learning (Kanvaria and Nagpal, 2018b). This platform provides online education for all level of learner's (school level and Higher level) they can develop their knowledge at any time and under any situation.

Ubiquitous Learning

Digitization prepared it achievable the ubiquitous learning i.e., A lot of digital devices and digital platform made it happen for learning. Learners can learn anytime and anywhere with the help of this device.

Mobile Learning

It is a deliberation direct related to spatial value. Prior, the learning takes place at a specific place, i.e., the classroom or discipline atmosphere. Through mobile learning with one click, students can read and understand the content of any of their lessons. Such devices came into existence which removed the concept of learning within the four walls.

e-Pathshala

e- pathshala is a portal developed by the CIET, and NCERT. It was initiated jointly by the Ministry of Human Resource Development; the app is launched in November 2015. with the help of e-pathshala digitalization made shift from equity to Equality. Digitalization treats everyone as a equal. It provide equal opportunity equal time and equal resources to everyone if audio and video are available then these are available for all the learners. If a test is being held for the learner with the certain time limit then the limit is for everyone. The digitalization made an endeavor to see everyone with the same eye in order to provide the equal chances and equal opportunity to everyone respective of their caste religion, gender, class and location. It gives equal freedom to everyone so that they can act on equal sort of the common platform.

Blended Learning

Blended learning is known as hybrid learning. The concept note circulated by the UGC argues that “ blended mode of teaching and learning, enhanced students-teacher interaction, improved student learning outcomes and more flexible teaching and learning environment, among other things”

A recent circular by the university grant commission (UGC) proposes that all higher educational institutions (HEI) teach 40% of any course online and the rest 60% offline.

Blue Jeans Learning

When we said that, global learning or global platform is the best way of education, then blue jeans learning is also a good platform to learn in online mode and empowering instructors to create an effective learning environment, the Remote Learning feature pack brings students, content and teaching resources into one platform and resolves administrative burden of leading virtual class sessions for HEI, Online Instruction and Corporate Learning.

Code Club

Code Club is a place where girls create, teach and learn through technology, creativity and coding. For that their world launched this app for girls in March 2016. Code club are very useful in the field of education because it is low cost, easily available and sustainable and scalable. Whereas coding work for 700 girls their aged 24 in Kenya, Uganda, Senegal from World Wide Web. Where we talk about gender discrimination, the school girls get a chance to code it. Various types of jobs are being found in the countries of Africa including Nigeria with the help of code club. They plan to spread the code club to more countries.

Kano computer and coding Kits

This type of digital technology gives school going children the ability to build their own interest toward the computer and digital world. Kano computer and coding kits donated 100 of the award – winning kits to their world in December 2015 and the first set went to a project in the double – shift school in Lebanon teaching Syrian refugee school children. It is designed to give people a simple, fun way to create with technology and arts.

Cloud Computing

In order to provide quicker innovation, adaptable resources, and scale economies, cloud computing, in its simplest form, is the supply of computing services via the Internet ("the cloud"), encompassing servers, storage, databases, networking, software, analytics, and intelligence. Typically, you only pay for the cloud services you actually use, which lowers operational expenses, improves infrastructure management, and enables you to scale as your company's needs evolve.

Role of cloud computing in higher education and implementation issues in higher education institutions in Oman, Zameer Bhar A., (2020) According to the researcher, cloud computing is crucial for all higher education institutions because of numerous factors and the necessity for technology sector improvements to slow down significantly. At the moment, the only solution that comes to mind is to implement cloud computing.



Fig :02 Cloud Computing

(adopted by www.google.com/search?sxsrf=AB5stBhfKhvjXHmVvQm1l3nbajiXreDUSg:)

Fig :01

Impact of Digital transformation in education

5G (fifth generation wireless technology) revolution is the biggest revolution in the field of digital era. Improve the quality of video conferencing, webinar, add hepatic response capabilities, strengthen immersive learning experiences using AR (augmented reality) & VR(virtual reality). According to Jagannathan (2021) work on 'How can 5G make a difference to education', state that integration of 5G network into education delivery revolutionize connectivity issues and streamline classroom logistics while improving the quality of the entire learning experience. And 5G network will help teachers across all educational levels facilitate an enhanced experience for learners. Instructor will save time to connectivity video connections.

National Knowledge Network (NKN) - National knowledge networks a multi- gigabit national research and educational work. The purpose is to provide a unified high speed network backbone for educational and research institutions in India.

Adaptation and usage of digital technology in higher education

The process of exchanging so many ideas from lower level to higher level is known as digital transformation of teaching and learning.

Some example related to higher level of digitization:

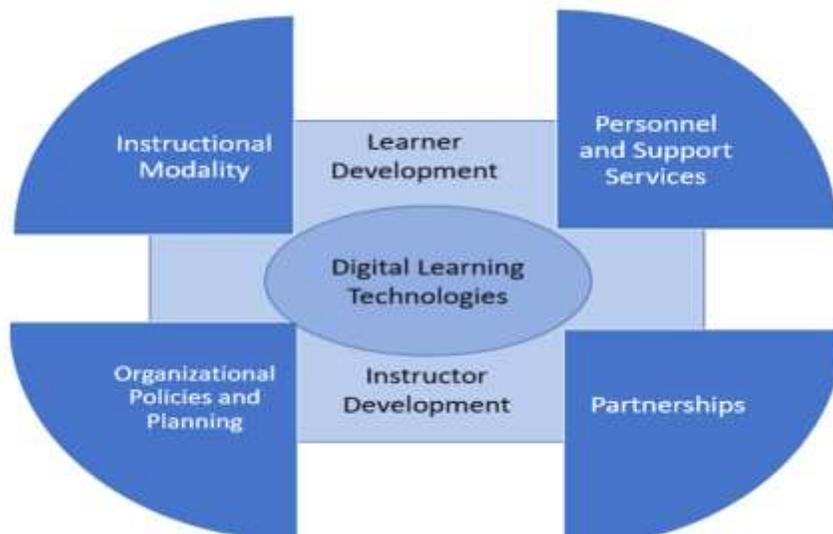


Fig: 03 Digital transformations in higher education

An LMS (Learning management system) houses all of the modules, activities, and course materials. The instructor can make and grade assignments on the LMS, take part in discussions, make announcements, and maintain an online grade book.

With the help of Synchronized technologies to hold real-time online meetings. Synchronous technology includes a variety of features, such as breakout rooms for small group discussions, audio and video, text/chat, screen sharing, polling, and whiteboards. These tools can help instructors maintain their online courses.

Multimedia applications, it has the power to keep students' attention, includes audio, video, and other interactive elements. Use multimedia software to record brief lectures, demos, orientations, etc. Multimedia software is available with open access.

Applications for collaboration, students can work online with their peers and teachers using web-based or cloud-based word processing, presentation, social engagement, and whiteboard apps.

Wilms,KL.& Mesks,C. et.all (2017) state that how social networking sites are preferred by bachelor's and master's students for communication and collaboration in higher education with the help of digital revolution. While Ph.D candidates and employees do not. The outcome of the study that email is still used for communication between student and employee groups.

Bajpai, S. (2023), The researcher's was to research participants of government initiatives to digitalize education, as these measures have been implemented to improve the quality of higher education by making it more accessible to all people, available at users' and learners' doorsteps, especially to those who are

Unprivileged. By being aware of these activities, they'll become more technologically friendly and able to use online resources with confidence and growing interested in using online education. They will have the ability to recognize and pick the best digital educational projects. and enhance their teaching-learning process to make it more engaging, long-lasting, and intriguing. The teachers and students alike are participants in these digital educational efforts. Dropout students as well as lifelong learners.

Advantages of digital transformation of Education



Fig.04

https://www.google.com/search?rlz=1C1CHBF_enIN913IN913&q=image+of+digital+transformation

The revolution that digitalization has brought in the education world has affected that globally, every student can get all the dimensions of higher education from one click.

Performance of students facilitates tracking. Increase collaborative learning, future – focused curriculum, time saving, and better future outlook but every coin has two sides where one and education has empowered us while the other or some of its shortcomings are also seen. As the excessive use of digital technology is paralyzing us, as well as causing various types of psychological, physical and mental diseases, nowadays students are moving more towards digital dependence by not using their cognitive knowledge. Along with this, according to the research, stress, depression, anxiety, frustration is present in the students. It is said to every human being that “You are the creator of your own destiny” Therefore, it must be ensured that we are merely users and not dependable.

Underwood,(2009) The researcher study also showed how important it is for schools to use technology to guide and develop learning-oriented behaviors. Students from schools where technology use was more prevalent were more likely to support learning. Building learning-oriented behaviors with technology in school is likely to be crucial in helping students to achieve academic achievement, given that the study also revealed some unfavorable relationships between using technology at home for leisure and Global citizenship school Education attainment.

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