



TRANSFORMATION OF DIGITALIZATION IN TEACHING METHODS – ITS APPLICATION AND CHALLENGES IN CURRENT SCENARIO

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Abstract:

In today's developing countries, globalization and technological changes has given a different phase to the economy, whereby the society are collectively facing the concern of the competition in various sectors, which also includes the education system. In the global economy, technologies play a vital role due to which the importance of digitalization has a continual growth universally. Although it existed largely from last few decades, digital education is essentially a modern invention. The considerable changes brought on by the digitalization of various aspects of the educational system are soon predicted as a mitigation to unexpected natural and man-made pandemics. This research paper seeks to offer insightful insights on digital education's potential advantages, hazards, and difficulties associated with adopting cutting-edge tools in the age of the internet and extensive online open courses. With the development of internet technology, we have observed a significant shift in how we communicate and collaborate among academics. The digital revolution encouraged open access globally. The evolution or the appearance of ICT has several implications for the educational institutions, where it has fueled up heavy information and knowledge. As various challenges are arising in education system, ICT can empower teachers and learners making it compelling for their literature, researchers, schoolings, trainings and achievements.. Traditional methods of using technology in education and modern approaches, which encompass a variety of methods and techniques like audios, visuals, e-learning, e-books, multimedia, etc., differ significantly. The researcher has used qualitative method of research through secondary data available from various sources.

Key Words – Digitalization, Education, Application, Challenges.

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Introduction:

Digital learning is a learning which made possible by technology that gives students some control over the location, time, pace, and direction of their learning. Although digitalization was a result of past

few years which had a tremendous growth at its own way specially during pandemic COVID – 19. However, learning has become now more dynamic, stimulating, and practical due to the development of the internet and ever improving technology. it is



clear that current tools and methods of information transmission are crucial for its development. Thus, this type of teaching would not be possible without the rapid development of computers and the Internet. The growth of computers and broadband Internet provided a very strong incentive to employ them in educational activities as well, thus it can be assumed that they were primarily about digital education and somehow drove its birth. The government is actively involved in taking essential steps to come forward with policies that will boost the digital education market in India. In order to make it easier for students to use cutting-edge educational tools, efforts are being undertaken to raise the grade of digital infrastructure across India. The way educational institutions operate will noticeably change in the near future, just like all other sectors. As a result, the most of the institutions are now adopting contemporary e-learning programmes, interactive lessons, educational games, electronic tests, educational resource portals, digital school registers, and learning process management systems.

Literature Review:

The below review of literature has been covered few of the following aspects of ICTs in education and teaching – learning assessment for learners and educators

- **(Rupali, et al.2018)** argue that technology plays a large role throughout attempting to make educational games more valuable, and therefore it was among the most effective methods for trying to advance knowledge and expertise, and that technological advances have transforming the way students and faculty communicate and work, or that they seek to make lessons more

interesting, participating, and interesting, while also luring both pupils but also colleges that join them. As a matter of fact of something like the the above, the fiction upon that proposal of technological developments to teaching is starting to grow, but really only a few researches have revealed upon that difficulties of assimilating emerging technologies into teaching and learning activities, especially nigeria, which is also the focus of study. The study would contribute significantly to closing literatures and providing the framework for future research.

- **Papert (1980):** The study focused on ‘Children, computer and powerful idea’. The study also revealed the role of digital media in enabling the children to learn better with a constructivist learning environment.

Objectives of the Study:

- To study the role & applications of digitalization of teaching methods.
- To understand and analyze the challenges of digitalization in education system.
- To study that how Digital Education Is Transforming Teaching Methods

Scope of study:

The Researcher throws some light on why technology-supported learning environments, when developed correctly and used appropriately, can engage students in learning and can have a positive impact on student out comes in higher education because that is the underlying driver of this study. The discussions focus on digital transformation impact on higher education students’ characteristics of ICT’s benefits to students in their learning process and also on teachers and their teaching methods and associated challenges. Further, this



section addresses the research objective, “to understand the strengths of digitalization in higher education context and the rationale of using. In this research paper the researcher had a qualitative way of study about TEL (Technology Enhanced Learning) in Teaching and learning assessment(education). Different perspectives can be taken on how digitalization affects learning.

Methodology:

Sources of data collection:

Secondary data: It mostly comprises of data gathered from a variety of sources, including books, websites, journals, and so forth. This paper will discuss the questions concerning about digital education system and its teaching methodologies. Here secondary data collection was done. The main research question was concerned about the need applications and its challenges of digital teaching methods. To know more about this future, several scenarios on future developments in education have been studied. The researcher has first studied the digital need application and its impact in education as well as teaching and learning assessment through Literature review.

Role and Need Applications of digitalization teaching methods:

Many variables use digital teaching methods in education as possible. These range from using ICT as tools to support conventional ways of teaching to fully ICT-enabled courses that brings about a completely different way of teaching. Below are some evidences of the applications of digitalization on educational achievements and on the way, Digitalization is used in education. Integration of TEL (Technology Enhanced Learning) has an important significance in the learning attitude of

teaching, creativity, construction of knowledge, problems solving, skill development, also important for making teaching and learning strategies, also in research work.

- **Increase the efficiency of teaching:**

Utilizing cutting-edge technical tools that promote better planning, simple and practical learning, quick assessments, better resources, new skills, etc. can increase teaching productivity.

- **Establish online libraries:**

Online libraries have removed the need for physical space and promoted communication between students, professors, and researchers from around the world thanks to technological improvements. Subject experts have gathered in online forums to debate certain subjects and assess the curricula, teaching style, and assessment techniques.

- **Encourage online learning:**

In reality, distant learning education has benefited from technology innovation. All learning tools are readily available, and it makes it simple for students to communicate with their instructors. Using technology and learning tools like social learning platforms, teachers may easily create and manage groups.

- **E-books:**

With technological advancements, students may now find information more quickly and accurately. Search engines and e-books are taking the place of traditional textbooks. On the other hand, by integrating technology into the classroom, students may start to learn how to be responsible in the digital world. Students can practise talking, searching, and connecting with



other digital citizens in the classroom, which serves as a microcosm of the greater digital environment. Additionally, technology has improved options for collaboration and communication. Cooperation has traditionally only been possible inside the confines of a single classroom or facility. Technology of today enables communication and collaboration on a scale that was before unthinkable. Children can impart their expertise to pupils at other schools around the nation.

- **Platform for MOOC:**

MOOCs help students develop their skills and credentials. It gives millions of students access to numerous skill-based courses, enhancing their employability even when they cannot afford an education. Students and working professionals can now learn at their own pace, from anywhere, at any time, thanks to MOOCs. Additionally, some of the lecture courses provided through this platform lead to certificates that establishments and businesses recognise as a positive move. Recent developments indicate that there is a substantial market for online courses offered through the MOOC platform. Professionally trained students and executives in the workforce are more driven to advance their skill sets to take advantage of expanding job opportunities in specialised industries. Personalized learning based on MOOCs is gaining popularity.

- **Provide environmental advantages:**

Technology use in the classroom also improves the environment. By keeping all of the important papers in one digital location, organisations can save money on print and paper. The physical contacts between students and teachers cannot be

replaced, even when there is less student mobility and more secondary emissions.

- **Evaluating students immediately:**

Digital technology has the potential to transform how kids learn both inside and outside of the classroom. Technology gives us new means of communication, knowledge acquisition, real-time student evaluation, and student preparation for a world that is becoming more and more digital. There are opportunities for educators to reimagine the way they teach, to learn, and to work more productively in order to promote wellbeing. In a learning setting, appropriate technology is therefore assessed for its capacity to meet educational objectives.

The ICT has changed the education scenario in the last few decades by emerging as one of the most efficient tools used in the learning process, by Teachers, learners, and researchers as well. Looking for matter beyond the text books is no longer a challenge with respect to time and resources anymore. Integration of ICT has an important significance in the learning attitude of teaching, creativity, construction of knowledge, problems solving, skill development, also important for making teaching and learning strategies, also in research work.

Challenges of Digitalization in Education System:

There are enormous challenges in education system for the learners as well as the teachers to accept the modern approach of ICT. Due to the impact of technology the students will not be satisfied with the traditional transmission approach of the lecture in transmitting the knowledge. In some studies there is a mismatch between the methods used to assess the



effects of ICT on student achievement and on how ICT is actually used in the classrooms.

- **Lack of Teacher-Student Physical Interaction:**

It's simple to underestimate the amount of teacher contact students receive on a physical campus. The instruction time itself, which includes real-time question and answer sessions, comes next. Then there is a chance for discussion directly before and after training, once hours, random contacts in the hallway, all these chances that are not available for digital education

- **Self-discipline:**

Self-discipline is necessary because many students find it difficult to maintain it in tertiary education settings. For the rest of their time, they don't have parents or teachers who are continuously looking in on them. They are not grounded if they skip class to go out and mingle. Others must put in the necessary effort and have the internal motivation. It is even simpler to "miss class" or neglect to submit an assignment for an online course.

- **Lack of good internet speed:**

Online education refers to interactions between instructors and students via video chats and video lectures, both of which require stable, high-speed internet. Delhi, Mumbai, and Hyderabad are among the top 5 cities with the fastest 4G and broadband speeds, while Bihar's Patna and Nagpur, Jaipur like cities are bottom five

- **Lack of Resources:**

In a developing nation like India, implementing digital technology in the educational system is a highly challenging endeavour because it calls for extensive resources and infrastructure. Due to the

effective and efficient use of commercially accessible software and hardware in digitally transformed education

- **Lack of Proper Policy:**

The government recently announced the implementation of NEP (National Education Policy) 2020, yet this policy once again did not achieved that position to place a strong emphasis on online education. The right platforms, technology, tools, interactivity, curation, and many other factors are all part of digital education. Sadly, we don't have a good policy for these items.

- **Digital Transformation in Teaching Methods:**

The nation is undergoing a digital transition, and the only way for the economy and society to evolve digitally is through education. To better promote many of the important responsibilities played by universities, many colleges are undergoing a digital transformation in teaching. It is a very challenging Endeavor to incorporate societal changes brought about by digital technology into both the teaching and learning processes. For certain steps to be effective, they must be carefully planned, taken into account, and put into action all at once.

- **Being updated digitally:**

With so much technological advancement, education can quickly become antiquated because there is always something new to learn. The greatest method to teach students to develop as people is to give them the tools they need to stay updated on news and other subject-related issues. Students use their laptops, phones, and iPads the majority of the time. Knowing which websites provide the greatest information and



what internet resources students can use can be fantastic tools for tutoring.

- **Using social media to engage students:**

Students all across the world spend a lot of time on social networks outside of schools / colleges, despite the fact that many institutions still prohibit social media applications.

- **Smart Class:**

Today's teachers employ projectors, VCD, DVD players, and eLearning systems to show tutorial videos and brief sessions online to assist students understand that studying can be enjoyable as well. Teaching with a whiteboard, chalk, and markers is a thing of the past. Nowadays, many schools and colleges have a TV or projector connected to the whiteboard, making it simple to transition from a regular lesson to an interactive digital session. Given that Google is like go-to resource in the modern digital era, this might encourage pupils to pay closer attention.

- **Assisting with online research:**

Encourage students to be prepared for class in the same way that teachers are, as this will make students more enthusiastic about attending classes. People are finding exciting professions in market research and other fields because to the growth of online research. Students can be motivated to utilize their digital resources to their fullest potential by offering them incentives or praising their online discoveries.

- **Building Community:**

The exchange between a teacher and a student need not cease in the classroom during the school day. An online community is a place where a team or a group can communicate online while submitting work, debating issues, or sharing

ideas. Teachers can create a platform where students can post ideas, suggestions, and questions about a particular subject for them to address at any time. Without realising it, the learning process continues even after lessons are over, thus being receptive to online activities like these helps students stay more focused even outside of the classroom.

Findings:

- From the study, it was found that complementary relationship exists between technology and constructivism. To create a constructivist framework, the technology has to be integrated with the classroom learning, the implementation of each one benefiting the other.
- With the help of various tools like colorful and attractive graphics, interesting and illustrative animations, appropriate sound effects, ICT provides multisensory stimulations and real-world experiences
- With the help of digital methods students understand that learning happens at different times and in different places, digital learning is expanding the range of learning possibilities available to them. Students benefit greatly from technological advancements and digital technologies.
- Due to digitalization in education, new approach of pedagogical which refers to the interactions between teachers, students, and the learning environment and the learning tasks that includes how teachers and students relate together as well as the instructional approaches implemented in the classroom. This approach uses problem-based learning provides vast opportunities for



educators to employ ICT tools to support and enhance teaching and learning.

- Now-a-days classroom environment is moved from teacher-centered to student-centered to blend learning approach which makes learners more responsive, digital usage are inclusive of smart boards, virtual learning, computers, the Internet, and electronic delivery systems such as audios, PDAs, televisions, and projectors among others.
- Digitalization is growing rapidly not only in developed countries but also in developing countries like rural areas where technologies are being used at every level in respect of education, required training are being provided to learners and educators, researchers as well.

Conclusion:

Education is termed as one of the basic requirements on which great nations are built. It is a kind of an investment that takes its time to pay dividends but, generates the highest returns when compared to any other avenues where resources can be committed. In modern generation of digital world young minds are enlightened to accept new ideas, show creativity, develop critical thinking and above all, enable themselves to absorb surrounding information for informed decision-making at any later stage in life, have the ability to adopt various technologies, in regard to this computer studies or ICT becomes immensely important in day-to day basis. Digital learning platforms are being adopted by more colleges and universities and schools to enhance student learning and academic development. Access to learning resources is available around-the-clock on cloud-based digital learning platforms. Even the course materials can be

downloaded for offline use. Additionally, these platforms provide a variety of communication capabilities for students to interact with teachers and their peers.

Technology and the digital education system fill in the gaps left by traditional classroom instruction. The limitations of conventional learning methods have been overcome by the fusion of technology and education, making education accessible to everyone.

It has become one of the most substantial driving force for promoting economic growth in the economy and also in other aspects.

Suggestion:

- ICTs in education should be more implemented in a very constructivist manner where it become easy for the learners and teachers to clear the obstacles where an institution faces due to lack development.
- Government should make strategies to support overall digitalization in education and teaching-learning assessment specially for developing countries and rural areas.
- In order to bridge the gap, it is necessary to focus on improving four aspects of digital transformation - access, usage, economic impact and social impact.
- There should be proper resources availability for mobilization of funds for the upliftment of digital education in rural areas.

Limitations:

The study has been conducted by using secondary data sources. The findings developed through the study might reveal variations due the different methods of ICT in various phases learning and teaching.



Bibliography:

1. Digital Transformation in Education: Advantages and Challenges (magenest.com)
2. Impact of digital technologies upon teaching and learning in higher education in Latin America: an outlook on the reach, barriers, and bottlenecks | SpringerLink
3. 7 Ways Digital Education Is Transforming Teaching Methods - eLearning Industry
4. (PDF) Digital Education: Opportunities, Threats, and Challenges (researchgate.net)
5. (PDF) Digital Education In India : Challenges and their Solutions (researchgate.net)

Cite This Article:

Dr. Hathi S., (2023). Transformation of Digitalization in Teaching Methods – its Application and Challenges in Current Scenario, Electronic International Interdisciplinary Research Journal, XII, Issue – I(a), Jan-Feb, 2023, 92-99.