

# DIGITIZATION AND IT'S ROLE IN LEARNER EFFECTIVENESS – A STUDY

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## **Abstract**

In today's digital era, technology is changing at a great speed. The impact of digitisation in the field of education in India has been very significant. India is a home to one fifth of the world's youth and in order to take advantage of the demographic dividend and keep youth unemployment under check, it has to invest in human capital development. This can be possible only with modern and digital methods of education and skill development programmes. The expectations of the industry are fast changing and the gap between industry and academia is getting wider with the demand for new and modern skills compelling all educational institutions to change the traditional methods of teaching and learning. The use of digital tools creates learner centricity and enhances learner effectiveness. This paper discusses the concept of digitization, advantages and its role in enhancing effectiveness of learners. It also discusses the changing role of a teacher in a digitised classroom. The paper concludes with the challenges involved in implementation of digitization.

**Keywords: Digitization, Skill development, Online learning, Unemployment**

## **INTRODUCTION**

Digital learning developed in India in 2002-03 in order to face the challenges of the changing time and to make students competent to cope up with the international students. The traditional classroom based learning has seen lot of modification and the need of the hour is to integrate classrooms with technology. The E-learning industry in India is a prolific one, witnessing a steady growth rate of 25 percent year-on-year and is projected to be a \$ 1.96 billion industry by 2021. With a network of more than 1.5 million schools and 18,000 higher education institutes, the scope for digitisation is enormous. Developing nations will have to invest heavily on training and upgrade their education systems and pedagogy to suit the global environment. Paradigm shifts are happening in the education industry with students being no longer interested in rote learning or traditional classrooms. They are eager to take skill based short online training courses to get better employment opportunities. Students have the pressure to acquire new skills and adapt to the changing job market. The role of the government and the educational institutions in preparing the youth or next generation to adapt to the challenging environment has become very crucial. Many colleges, universities and GFGCs have started using technology with the help of government and private funding. Information and communication technology (ICT), online or e-attendance, PowerPoint slides, virtual classes, whatsapp student groups etc. have been widely used today. Along with Massive Open Online Courses (MOOC) such as Swayam (an online life-long training platform developed with the help of Microsoft) the Government is also emphasising on boosting the use of tools such as virtual lab, virtual reality (VR) enabled classrooms for both students and teachers. Digital tools would provide a conducive environment for learners to hone their skills.

**OBJECTIVE OF THE STUDY** – To discuss the general phases involved in a digitized classroom, advantages and role of digitization in enhancing learner effectiveness

**RESEARCH METHODOLOGY** – The data has been collected from secondary sources and interaction with experienced faculty involved in digitisation

## **CONCEPT OF DIGITIZATION**

Digitization uses digital tools to make all the sessions interactive and learner-centric. The digitised content can be accessed through desktops, mobile phones, laptops etc. It shifts from pedagogy(child learning) to andragogy (adult learning) as the learner can assess his/her performance, make self-assessment and keep improvising his/her performance by attempting the online quizzes and watching the reference videos.

Digitized learning in general has the following **three phases**:

### **Preparatory Phase**

This phase happens before the students attend the particular session. Every subject is divided into a number of sessions or classes. For each session there is a set objective along with KSA (Knowledge, Skill and Attitude) attributes of the learners. The KSA states the Knowledge, Skills and Attitude that would be developed in the learners after attempting the particular online quizzes and exercises. This can be handled differently depending on the institution.

The preparatory phase of learning begins with Ppt, Video lectures, videos on the particular session or topic which is released online. The learners access the materials followed by Assignments or Learn by doing exercises which includes Quizzes, MCQs on the particular topic. The self-assessment questions help the learners to judge their knowledge by themselves. Web references and e-book references on the same can be given for reinforcement of learning. This preparatory phase gives a complete idea for the students about the topic.

### **Classroom phase**

This happens inside the classroom, after the preparatory phase wherein the students or learners attend class after doing the self-assessment quizzes and after going through the online resources. In the classroom, discussion of the topic with the students would be done followed by debriefing and online quiz/exercises. An activity or practicals also may be conducted. After this, online quizzes are taken by the learners in the classroom and the performance of each learner is got by the facilitator online. By this the facilitator can come to know how many of the learners have understood the topic in the true sense. If many students have not fared well in the in-class quizzes the facilitator can once again discuss and clarify the doubts face to face.

**Post class phase**

To confirm the learning post-class activities are assigned to the learners who have to attempt the MCQs, Crosswords, Match the following, etc. online. This phase happens after the session ends for the day. It is like an online home assignment. Online assessment takes place once the learners upload the answers and both the facilitator and the learner get the progress report on the dashboard.

Additional text book reference, videos and advanced quizzes are also used for learners who want to explore more or gain expertise on the topic. Sometimes online group assignments are given to facilitate team work. The three phases give a complete idea of the topic and help the learner throughout the learning process. It also increases learner engagement. The sessions automatically become learner-centric.

The students can discuss about the topic studied on the online discussion boards after the class. They can also post queries and also tell about their expectations or perceptions about the topic being discussed even after the session or class ends. Announcements can be made about deadlines for assignment submissions and exam dates or related to new videos and lecture material that has been uploaded by the teacher. Such discussions help in skill development of the students.

Thus Digitization happens in the above mentioned phases viz pre-class, in-class and post class.

**ADVANTAGES OF DIGITIZATION**

The performance of the students can be evaluated easily. A complete tracking of the online quizzes, assignments or group projects can be done easily. It saves time. The participation of the students on the online discussion boards can be evaluated and based on their online discussion marks may be given. It also caters to all types of learners since it would comprise of videos for visual learners, audio clips for auditory type of learners and learn by doing exercises for the kinaesthetic type of learners. The major advantage is that the student can be assessed after every session as and when he/she attempts the post classroom exercises that are uploaded as a home assignment. The students will have the opportunity to know what is going to be taught in the next session so that they can come prepared and also clarify doubts in the classroom phase. They have access to the study resources even after the session ends. It offers flexibility in terms of location. It also gives a learner the confidence on the subject as preparatory material on the next session like slides, videos, references are already given so that the learner can read and understand the topic and come with all the doubts marked. These doubts get clarified in the Classroom session and the in-class assignments enhance the understanding of the subject thoroughly. The post class resources and assignments further reinforce the learning process and a considerable mastery can be had over the topic by the learner. Further the discussion forums help the learner to clarify any remaining doubts about the topic from the facilitator as well as peers.

**ROLE OF DIGITIZATION IN ENHANCING LEARNER EFFECTIVENESS**

Technological tools connect students of different learning styles. It helps in collaboration and open communication between the learners. It develops individual thinking process. It helps to develop student's digital citizenship skills. It helps in developing creativity and reasoning skills of the students as they participate in the discussion forums. The pre-class digital resources help the learners to become more confident about the subject and understand the topic beforehand. Students also develop expertise as the post class online assignments reinforce what they have learnt in the classrooms. The online Quizzes and Learn by doing exercises develop critical thinking skills of the learners. Caselets and videos keep the students engaged and thereby increase the concentration and retention rate. In a digitized learning, the student develops good decision making skills along with effective time management. Meeting the deadlines of online exams, quizzes and group projects makes the learner to manage time effectively. It also gives a sense of ownership to the learner as they take self-assessment quizzes and login with their usernames. It helps the teachers and learners collaborate effectively and this builds a sense of trust and approachability. Online feedback is taken from the learners after every session to understand how the session can be made more effective. This gives an opportunity for the facilitators to improvise the course based on the feedback received. Apart from online, feedback is also given on classroom activities face-to-face. Hence it becomes a continuous improvement strategy for both the facilitator and the students/learners. Hence Digitization contributes to learner effectiveness when used in the right manner and when all the other conditions like good internet connectivity and other necessary facilities are met.

**ROLE OF TEACHER IN DIGITIZED LEARNING**

In this approach the role of the teacher becomes that of a facilitator and intervention is required when the students have doubts regarding the topic. The facilitator guides throughout the discussion and gives valuable feedback. The facilitator motivates the learners to engage more in the online activities as well as in classroom discussions and activities. Feedback is given based on their performance in online discussion and in-class activities. Digitisation gives more importance to the role of a facilitator than the teacher in the traditional classroom.

**CONCLUSION**

Digitization of classrooms needs heavy investment and would be possible only with collaboration with private sectors or companies and effective government policies. It would also need Wi-fi enabled campus for the online assessment of students and evaluation on discussion forums. Active participation of students may not be possible due to lack of internet connectivity or laptops or mobile phones in rural colleges. Proper monitoring of the online assessments and feedback may not be possible if the students are unable to access the online material and attempt the tests due to different reasons related to rural areas. Lack of tech-savvy facilitators and lack of computer literacy also is a major challenge especially in rural educational institutions. The government has to take initiatives to provide the technological facilities to educational institutions and to train the students in the requisite skills. Hence change management can happen only with the cooperation between the government, academia and the private sector. Schools and colleges need to work on imparting new skills, adopt new and innovative teaching methods that cater to the needs of the future job market. Government has taken up initiatives under Digital India or e-kranti to digitise classrooms, tie up with reputed institutes for Massive Open Online Courses, to provide Wi-Fi availability to rural colleges and schools. But with the rapid change in technology, it has to be very fast especially in the rural educational institutions in India who have less exposure to latest technology and funding compared to the private institutions and universities. A variety of traditional and modern tools if integrated into the classroom in a phased manner along with proper training to the teachers to handle the tools, then learning would be very effective and the students who are going to be churned out of such educational institutions would be ready for the challenges thrown by the Fourth Industrial Revolution.

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