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**Digitization in higher education: Reformation in
teaching and learning trend**

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Abstract

A new phase of learning has begun with the use of technology to pioneer new ways of learning, teaching, and research to increase admissions and retention. The phase of radical development has taken over every corner and niche with the Smart phones, laptops, and tablets etc. It is evolving for the sake of the betterment, present generation's students are not born to be confined by the limits of simple learning, and their curiosity is too vast and cannot be catered with educational systems that were designed earlier for them. There is need to use digitization in our educational system. The Government is also focusing on greater use of technology as it looks to implement large scale reforms such as Revitalising Infrastructure and Systems in Education (RISE) scheme.

Keywords: Digitalisation, technology, education, e- learning

Introduction

India's educational sector is being witnessing the increased use of technology like Cloud Computing, Artificial Intelligence and Virtual Reality in daily practices related to educational sector. The Government is focusing on greater use of technology as it looks to implement large scale reforms like Revitalising Infrastructure and Systems in Education (RISE) scheme.

Digitalisation offers fluidity to the Indian education sector by being a supplementary form of the system. Ed Tech can be customized as per students' requirements. While the traditional education system has uniform approach. It can be reformed as per the student's capability to understand and imbibe any particular subject or topic. Digitization has been prompting higher education as never before. The digital revolution is now edging its path into the classroom and now it is possible to have a archive in the pocket or in every classroom. As Google Chief Eric Schmidt has said, 'the internet isn't making inevitable change faster; it has become the engine of change'.

The world is moving towards digitalisation and we have to keep pace with it. The traditional education system in India is here and will stay here for the long haul and that no one can take away that type of learning experience. But our education system needs to be update with time and become dynamic and needs to adapt to present technology.

Being a practical approach, digitalisation brings in tracking students' performance on record. We can easily evaluate a child's progress by going through his attendance, exam scores, assignments, etc. One has a freedom to choose a tutor, schedule class as per one's time availability online as per their convenience.

Digitalisation as a big time saver. Apart from metros, there are many tier II and tier III cities where the transport system is not fully developed and students have to commute for long hours to reach their educational institutes. In this scenario, a digital course comes as a rescuer to needy students from even the remotest parts of the country. One just needs to log into the respective website or switch on to their dish TV channel to learn a subject rather than

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spending long hours in the commute from one place to another.

“The use of technology coupled with bold decisions can help India leapfrog into inclusive growth and improve the quality of health and education.”

– **Bill Gates.**

Digitalisation even offers a safe mode of learning that is accountable and transparent. Parents could keep a track of their wards’ progress by logging into the website. Therefore it helps in creating a partnership between parents and teachers with one goal in mind - better learning and

guidance for students. It also provides them a platform to air their suggestions and views that can be used to improve the system, unlike the traditional method where one has to be quiet fearing reprimand from the teacher.

The three key missions or objectives of higher education

1. To show the effectiveness of E learning
2. Creating new knowledge (i.e research) and Disseminating (reasonably well established/understood) knowledge
3. Mentoring (in smaller group settings)

Review of literature

Author	Analysis
Wei Xiaoxia (2017) [7]	studied Using student voice in learner-centered course design
Kijpokin Kasemsap (2016) [3]	Explored the Role of Web-Based Learning in Global Education, Revolutionizing Education through Web-Based Instruction,
Fahri Vatansever and Nedim A. Yalcin, (2017) [6].	They studied e-Signal & Systems: A web-based educational tool for signals and systems,
Churchill D. (2011).	A study of the explorative use of blogs with a postgraduate class.

➤ **E phase of learning has advanced techniques like:**

- **Online courses:** Online courses are developed by experts those who have unmatched proficiency in their particular field and can give the experience of real-time learning by designing their own online course.
- **Online exams:** Online exam, makes the examination process convenient for both students and teachers.
- **Digital textbooks:** e-textbooks and e-texts, digital textbooks provides an interactive interface in which the students can assess multimedia content like videos, interactive presentations, and hyperlinks.
- **Animation:** Students learn in a better manner in this captivating approach. By visual representation of the topic, students grasp the concept in a more understandable way. The toughest topics could be presented in a simplified way with the use of animation technique.
- **Improvising them with Knowledge:** By converting the whole of the educational system to digitization, the use of various techniques like online courses, online

exams, digital textbooks, quizzes, and e-notes are improving the quality of education for the students who are coming from various regions, schools and colleges.

- **Internet has Made Digitization Possible:** After the U.S and China, India has been rated as the third largest consumer of internet. The core existence of online education platforms is being possible with the help of internet. Most of the schools and colleges in India make use of the internet and they are basically using it for conducting online exams.
- **Administrative burden get reduced:** With digital systems being prevalent in education we are often experiencing different levels of ease in online education system, but the administrative part is also not off the table. Keeping the records of students and maintaining their attendance and roll number is a big responsibility that too when the students are outnumbering. So colleges and institutions are adopting more hassle-free computerized methods and avoiding the old manual methods of maintaining and storing the records.

	Traditional Classroom Learning	E-Learning
Advantages	<ul style="list-style-type: none"> • Immediate feedback • Being familiar to both instructors and students • Motivating students • Cultivation of a social community 	<ul style="list-style-type: none"> • Learner-centered and self-paced • Time and location flexibility • Cost-effective for learners • Potentially available to global audience • Unlimited access to knowledge • Archival capability for knowledge reuse and sharing
Disadvantages	<ul style="list-style-type: none"> • Instructor-centered • Time and location constraints • More expensive to deliver 	<ul style="list-style-type: none"> • Lack of immediate feedback in asynchronous e-learning • Increased preparation time for the instructor • Not comfortable to some people • Potentially more frustration, anxiety, and confusion

Pioneering new teaching methods using innovative classroom technologies by:

- Enabling collaborative teaching efforts with partner institutions and stakeholder communities worldwide.

- Implementing new teaching methods such as flipped learning, virtual classroom and self-guided learning.
- Developing next-generation learning spaces used to capture, manage and share lectures.

Challenges

- The major suggestions in pupil- teacher interaction are to improve content and to make more class digital by providing devices like projector and interactive board. Content is also a problem faced content should be better for children and software should be regularly updated. Proper internet and electricity connection is also some of the suggestions mentioned by the teachers in the institution. They want solar panels or some kind of funds for schools or colleges which could solve electricity and electricity bill problems. More and regular teacher training opportunities and refresher courses should be extended for better knowledge.

Conclusion

We are in the age of the Internet of Everything (IoE), thanks to the network, Wi-Fi, IT Security, cloud surveillance and software applications for learning. These aids in saving costs and provide a connected learning experience. In the new educational environment, several institutes are shifting from campus-based learning to learning on mobile devices over a secure connection. A digital infusion in education allows personalised learning as students can use digital devices. It opens up communication channels, allowing students to get more attention in the academic, strengths and weaknesses and learning pace of every student can be determined. It also enables them to track their coursework progress and identify areas of improvement. Device -based learning will help to get rid of textbook constraints that students faces. One can use a digital surface anywhere. Video recordings of lectures allow students to re-capitulate what they've missed. Virtual Reality can also be used to help student in e-learning platforms on mobile devices to interact directly with study material, and Augmented Reality can help trainers and teachers in performing tasks efficiently. Student feedback can help improvise the system in a better way.

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