ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2019; SP4: 23-25

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(Special Issue- 4)
One Day National Seminar
"DIGITALIZATION OF HIGHER EDUCATION"
(2nd March, 2019)

Digitalization of education: A great change in teaching learning trends

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Abstract
"We need technology in every classroom and in every student and teacher's hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world."
David Warlick

Gone are those days when classroom training was restricted to textbook learning, teachers using the blackboard to explain things and students writing down notes in copies. The traditional teacher-centred methods of teaching and task-based approaches to learning focused more on making notes and memorization. However, it's no more chalk and talk in most schools. Classroom teaching has become more and more interactive nowadays with the use of digital methods such as PPTs, video presentations, e-learning methods, practical demos, online training and other digital methods or platforms. Digital education is making its way into the education system of India. There are multiple benefits of digital learning in transforming a child's life like: Motor Skills, Decision Making, Visual Learning, Cultural Awareness, Improved Academic Performance, Inventive ness etc. Additionally coding is also proving to be a magic of technology among kids. As the current generation of students is well-versed with laptops, I-pads, and smart phones, these innovative methods of teaching guarantee more participation from students. So, present paper throw light on importance of digital education in India.

Keywords: Digitalization of education, teaching learning trends.

Introduction

Digital education has an important role to play in India. Nowadays all communication channels in the world have become modern, fast and high tech due to digital technology. The World is advancing with digitalization lifestyle through the use of the internet, mobile phones, mobile apps, tablets, laptops, radio (mostly FM), TV and other modern devices, which has made everything in our life simple and easy to achieve. It also has an important role in the field of education in India. In the field of education, digital education has given a new direction to Indian education methods, which reflects in the bright young generation of smart students.

In India, there are many schools that include digital education for teaching students. However, in India, only the schools in metro and tier-1 cities are applying this modern and comfort technologies for educating students. Tier -2, Tier -3 and rural areas are lagging way behind in use of this technology. The government of India is trying its best so that digital education reaches all the rural areas in India. In most of the schools in the rural area, the only method presently which can be called digital education is to educate students through TV channels.

There are many parents who are not aware of digital education in India. And that is a reason why they are unable to give their children knowledge and accesses to digital education. If you are a parent or guardian who is unaware of various digital education channels then we will guide you with different aspects of digital education.

Benefits of Digital Education

The digital education is the modern technology that facilitates us to introduce elements of gamification (learning through games and fun) into the education process. It helps to improve student concentration and information retention as well as their ability to do their own research and work in teams. It also permits for personalization of learning and encourages students to find the content that they like. The digital education is important for students in all spheres of education. There are a number of benefits that show why digital education is important in India.

- Digital education helps the student to be more attentive and increase grasping power.
- It helps to makes their education more effective and efficient.
- It helps to make student pay more attention to subjects.
- The active online screen helps students to develop their language skills.
- Many students hesitate to ask questions to the teacher in the classroom, here they can easily attend the recorded sessions to clear their doubts.
- It is a user-friendly platform, where the student can access their courses very well from anywhere. If the student has missed their certain classes or sections then they can easily access the class notes and download files from the school website.
- The students can use exclusive online study modules of various subjects, which help in enhancing their knowledge even without a teacher.
- With the digital education, the students can join further with the visionary advisors and faculty to get guidance or solve the questions.
- It provides students the facility to study at their convenience at any time and place.
- Students can access to online learning study materials and digital content through various tools.
- Game based learning is creating a buzz virtually everywhere.
- Many distant learning programs can be covered with digital education.
- It provides video based education for better understanding.

Factors that are enabling the growth of digital education

1. Personalized and Adaptive Learning

Learning platforms, software's and digital devices are together creating countless new ways to modify education. This way, the academic potential, strengths, weaknesses, aptitude and learning pace of every single student is catered to. Precise, mobile and reliable applications are being created to teach students, help them practice their learning's, take assignments and manage their schedules.

Schools are now providing their students with digital devices like desktop computers, laptops and tablets. These devices are aiding them in the teaching process while also helping them understand how students learn and how to enhance their learning process.

2. Two-Way Conversations in E-Learning

In the traditional classroom seating scenario, students are unable to get the individual attention they need due to time constraints. In contrast, the one-to-one context of learning in digital mediums currently students to learn through videos and chat with an expert.

The upcoming 'Learning Management System' will continue the two-way communication model between students and experts. More importantly, it will let students track their coursework progress, identify improvement areas and offer ways to make the most of them.

Through the help of 'Big Data', experts will be able to capture student feedback within the framework of the content provided. With this alone, they'll be able to improvise and enhance their offerings in new ways to further benefit students.

3. Mobile-Based Learning

Over the past few years, mobile learning has picked up by the populace who has gradually assimilated it in their lives. It has offered students the flexibility to access educational content seamlessly across multiple digital devices like desktops, laptops, tablets and smart phones.

The Smartphone user base in India continues to increase, in both urban and rural areas. The coming years will witness users accessing most of their educational content through internet powered smart phones in a massive way. Most educational content, including even online courses, will be optimized entirely for mobile devices.

4. Video-Based Learning

Video learning has always appealed to students since it closely mirrors the traditional classroom teaching style. Earlier, students watched video lectures as a form of homework and then discussed them during the next class. Over time, this habit brought about a remarkable improvement in their performance, with a noticeable improvement in grades.

Video lectures allowed students to learn subject syllabi at their own pace and dedicate time spent in class towards interactions. This will continue to be a trend in the future where students will have access to rich and interactive content that will be useful for both formal training as well as performance enhancement. The increase in video-based learning on mobile devices will eventually account for 80 per cent of all internet traffic by 2019.

5. Open Educational Resources

Open digital education resources have commonly been used in distance learning courses. They consist of freely accessible media for learning, teaching and research purposes. They are licensed to be revised and disseminated freely by teachers among students. This allows the latter to gain access to an extensive arrive of study material that is otherwise restricted indigenously.

Open educational resources also facilitate the creation of a flexible environment where teachers can customize educational content for individual sessions or classroom sittings. This is applicable for typical curricular subjects like mathematics, sciences and languages, as well as business and fine arts.

6. Usage of Virtual Reality (VR) and Augmented Reality (AR) for Learning

Virtual Reality and Augmented Reality are already buzzwords in the technology space. Their advent in e-learning has massively impacted the efficiency with which it

is offered to students and the way it assesses their performance.

VR allows students using e-learning platforms on mobile devices to directly interact with study material. This keeps their engagement levels high and motivates them to learn more and better. On the other hand, AR facilitates teachers and trainers in performing tasks, they previously haven't or cannot, in a safe environment. Together, the both of them are engaging students in ways like never before and are poised to become a lot more widespread in their usage and impact in the future.

Challenges of Digital Education

Some of the major challenges for digital education in India are:

Resource and internet connectivity related challenges: - One of the main challenges for digital education in India is poor internet connectivity in rural areas and some part of urban areas. Majority of population across India has still no access to internet and a large population in rural areas is still illiterate in the field of digital technology. More Innovations required making the digital education more interactive and robust.

Shortage of trained teachers: - A major obstacle in the use of digital education in rural area is the lack of knowledge and skills. There is a shortage of teachers, formally trained on digital technology. In some of the academic institution in rural areas, school teacher and college professors are not interested in using digital tools for conducting classes. They feels that a lot of information is explained to the students at one go through the digital medium and they prefer traditional teaching methods of chalk and blackboard

Language and content related Challenge:- Languages is one of the main barriers for the development of digital education in India, there are several different languages in different state have been spoken all across country, pushing all the digital content in all these regional languages some time becomes difficult for the agencies.

Poor maintenance and up gradation of digital equipment: - In rural areas maintenance and up gradation of digital equipment is one of the major challenges. This is largely due to budgetary constraints by government. The digital education projects in rural schools are not self-sustainable. At initial stage various projects have been launched by government for the development of digital education, but later, they have not been taken due care for the maintenance of digital equipment which is affecting the digital education development in rural areas.

Insufficient funds: Digital education involves effective and efficient usage of appropriate and latest hardware and software technology available in the market. In developing countries like India, digital technology implementation into education systems is a difficult task as it requires huge funds and infrastructure. Through Digital India program, the government has promised availability of funds for technology implementation but lack or insufficiency of finances leads to redundant and obsolete infrastructure and equipment's in rural schools.

Conclusion

Education sector in India has seen a series of rapid expansion in last couple of years which helped to transform the country into a knowledge haven. The study clearly points that development of education infrastructure is required for the development of digital education across the country. This will lead to considerable increase in infrastructure investment in the education sector. Democratic governance, English speaking tech-educated talent and a strong legal and intellectual property protection framework are required for the development of digital education in Indian society. Government of India has also taken major Initiatives for the development of digital education in India like opening of IIT's and IIM's in new locations as well as allocating educational grants for research scholars in most government institutions. Over the past years, a number of studies have shown benefits from the use of technology in education. The role of technology in education is vital, and the question is no longer if technology enhances learning, but rather how do we improve our use of technology to enhance learning? I encourage you to think about more ways of how technology has improved education and how it can positively impact it in the near future.

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