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Emerging trends and challenges in digitalization of education

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Abstract
With passage of time, the education system all over the world has gone through a dramatic change. The traditional education system no longer fulfills the modern day complex needs where everything is dynamic and evolving at a very fast pace. There is a huge amount of transformation that takes place in the present world in every second. Therefore, a new and modern way of education is required to handle such transformation arising as a result of creation of huge amount of information in a systematic manner. Thus, to resolve the shortcomings of the traditional education system, the world is moving towards digital education which addresses all the issues and challenges of traditional education. Digital Education can be defined as the use of a combination of technology, digital content and instruction in the education system to make it more effective and efficient than the traditional education system. School and colleges are increasingly adopting digital teaching solutions in their academic, and trying to make the classroom environment more inclusive and participatory. In India, from last few years there has been a considerable rise in Digital and Live Virtual Classrooms at different levels of learning. Through this article, an attempt has been made to discuss the upcoming trends in digital education system that will shape the future of our coming generations for the better.

Keywords: Digization, higher education

1. Introduction
Digital education means digital learning. It is a type of learning that is supported by digital technology or by instructional practice that makes effective use of digital technology. Digital learning occurs across all learning areas and domains. Digital education gives win-win opportunities for all, at one side School, colleges and other institution finds the rapid rise in enrolments and added revenue because of digital education, and on other side students view this as a flexible and alternate option allowing them to study as per their convenient time and pace.

Teachers and professors too find it convenient to prepare their teaching plans aided by digital technology. Teaching and learning becomes a smoother experience as it includes animations, gamification and audio-visual effects. Over the last few years digital education in India is evolving at faster pace. It is changing the way students learn different concepts and theory in school and colleges. The traditional chalk and talk method in school and colleges has been slowly changing with more interactive teaching methods as schools and colleges are increasingly adopting digital solutions. Digital learning guarantee more participation from students as the current generation of students are well-versed with laptops, I-pads, and smartphones. There are different private players in the field of digital education like Educomp, Tata Class Edge, Pearson, and Teach Next who are continuously engage and developing different interactive software to help teachers in classroom teaching.

2. Emerging trends of digital education

2.1 Digitalized classroom/Flipped Class rooms a growing Trend

A complete revolution in the way we learn today has been brought by Technology. Teachers teaching in the classroom can capture the students and the full strength in the class by digital screens, thus facilitating each child to get the same base content and input from the teachers. This feature of digital era has increased the Student engagement as it combines various instructional styles. Each student gets in contact to world-class education, which is not easy to impart by the traditional white chalk and black board teaching. This new learning is more interesting, personalized and enjoyable. With this technological inclusion in the school teaching the students feel studying as enjoyable, easy, competent and above all interesting. The aim of a teacher however should be to create such an atmosphere which makes every student want to study.

2.2 Video based learning

Video-based learning as a part of digital marketing has geared up in Indian Education Sector and has made education engaging, entertaining and exploring. It enables learning with a pedigree of learning out of leisure with creativity, fun and entertainment on cards via the wonderful Apps, podcasts, videos, interactive software, e books and online interactive electronic boards. Children are excited and operative with interest to manage the showcase via their intelligence, exploring the weak techno skills of teachers and assist them in public with pride and honour and recognition.

2.3 Massive open online course (MOOCS) & other distant learning programs

A massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web. India is considered to be the biggest market for MOOCs in the world after the USA. Since the population of India is huge, massive open online course (MOOC) are said to gateways for a lot of Indians in terms of bringing an educational revolution. Online distant learning programs give a great opportunity to avail high quality learning with the help of internet connectivity.

2.4 K12 sector Game based learning

K-12 School is a terminology used as Kindergarten through XII grade. Various start-up companies have been the contributor for this sector. Today the world is of Y-generation people who are acquainted with the technological developments taking around them, and they are also surrounded with the required skills and abilities. K-12 creates the game based learning environment, which enables the learner to easily get the word of education in India and give us a better self-trained Y generation.

3. Advantages of digital learning

Digital Learning has become very popular with time. The following are the advantages of Digital Learning:

No Physical Boundaries Digital Learning has no locational and time restrictions. In case of face-to-face learning, the location limits the group of learners to those who have the ability to participate in the area. But this is not the case in digital learning. In digital leaning, there is no physical restriction and the learner can attend the sessions anytime, anywhere according to his/her comfort.

More Engagement Digital learning is a more engaging experience as compared to traditional learning. Through digital learning, a course can be designed in a way that makes it interactive and fun through the use of multimedia. Even, the more recently developed methods of gamification can be used to enhance the engagement factor.

Cost Effective Digital learning is cost effective way of education as compared to traditional learning. This is directed towards both learners and teachers. In digital learning, here is a good chance that you don't have to pay exorbitant amounts of money to acquire textbooks for school or college. As textbooks often become obsolete after a certain period of time, e-learning is definitely a cost effective way of learning because of the reduced cost.

3.4 Comfort Zone Comfort zone can be established in digital learning as you can study at the time that suits you. In case of traditional learning where all the students have to present in the class when the teacher is teaching. The same is not the case which digital education. In digital education, the student can study at the time of his own comfort.

4. 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 to make 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. In rural areas, primary teachers and senior teachers are reluctant to get trained and adopt digital technologies for digital education in school because they are in view that these disruptive technologies are out to replace them permanently.
- 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 upgradation of digital equipment: In rural areas maintenance and upgradation of digital equipment is one of the major challenge. 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 programme, 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 paper 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. It is a holistic way of teaching and learning that meets the needs of today's digital natives. It is an environment made up of collaboration, choice, and an array of technological resources that supports a successful online learning experience. However, in order for learners to be successful in this learning environment, the challenges to digital education must be overcome with support and a best practice solutions.

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