

Impact of Digital Education in India



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The process of imparting education has gone through a sea change. If we look at the scenario of traditional education, 10-20 years before now, technology has taken over almost every field of our lives and the onset of online courses came as a path-breaker. No longer did one need to have access to schools, all one needed was a computer with a good internet connection.. You could take up any course you like (often held in partnership with major universities and institutes all over the world), learn at your own pace, discuss with your fellow virtual learners and contact experts online with any queries you might have. Many online learning websites also give you a valid certificate at a nominal fee. This relaxed pace which promoted self-learning was a pole apart from the common rote education process followed in maximum Indian schools. Now however, digital learning has stepped into the system considerably and has a far-reaching impact towards educating the vast population of India.

It is an era of digitisation and technological advancements where we are now experiencing an impact of digital learning on almost every aspect of our lives and it is an ongoing process. The impacts of digitisation are rapidly visible in the field of education and have affected major changes in the manner how education is being imparted and consumed. The learning and reliance on printed material or book-based learning is diminishing and becoming a characteristic of the past. Till last century, the education system in India was the traditional classroom-based learning, where students didn't get opportunity to participate actively in lectures. To face the challenges of the changing time, it became necessary to make concepts more clear and students competent enough to cope up globally. Hence, the concept of digital learning evolved in 2002-03. With technology spreading its wing to the education sector, the typical classroom which was once characterised by boring hour-long sessions is now transforming into an interesting, fun-filled learning. Digital education has made life easier for both students and educators.

The e-learning industry in India is a lucrative one, witnessing a steady growth rate of 25 percent year-on-year and is projected to be \$ 1.96 billion industry by 2021. With a network of more than 1.5 million schools and 18,000 higher education institutes, the market for digital education in India is enormous. Today, digital learning is no longer a luxury business, but implementation of digital tools of learning has become a necessity in schools. Digital education in India on being compared to the developed nations is growing at a substantially rapid rate of 55 per cent.

Today, India is one of the world's top destinations for education. With some of the best colleges and universities, it is renowned for its excellence and high standards. What's even more interesting is how technology has advanced rapidly to transform the way students in India consume educational content. Additionally, the penetration of internet-based smartphones is taking quality learning to students across geographies in India. Small children are watching their favorite cartoons and learning pictorial rhymes on the same device. Education is being imparted to them through flexible and non-intrusive formats. As a consequence, students across all age groups are discovering the joys of learning and having fun while at it. There has been a noticeable shift in the perception of parents' and teachers' view in digital learning too. Today, institutions are making efforts to shift the focus back on students to reinvent the way they learn right throughout their life. India might not have readily adopted education technology but it is disturbing to see how a traditional sector like education is using technology as an enabler so far. Today, some cutting-edge technologies are being used to further enhance this sector, while grabbing the attention of entrepreneurs, venture capitalists, corporates and governments.

Key Factors of Digital Education

The key factors leading to growth of digital market in India are: Rising demands from various segments, growing number of smart phone users, improving penetration of internet, and increasing participation at the government level. New age technology platforms help in assessing performance of students, teachers and institutions as a whole and are



increasingly being adopted by educational institutions in India. Cloud based platforms which help classrooms go paperless are also finding takers. Also apart from the latest developments in ICT classrooms, Augmented Reality (AR) and Virtual Reality (VR) are being adopted in the field of education.

Further, the launch of a plethora of IT related platforms has generated huge entrepreneurship opportunities and many education startups have sprung up with new and improved versions of e-learning modules in line with the demands and ever changing needs of the students. E-learning contents are designed to present a holistic picture with audio supplements, which makes learning lot more interesting as learners now utilise both visual and audio senses. There are many companies who are found today instrumental to take e-learning to schools and students in various forms and they support more than million learners across the country with digital content.

ICT solutions



Innovative deployments of ICT solutions have been instrumental in transcending multiple barriers in providing access to education in the country. With increasing digital literacy in the country, ICT solutions have gained momentum in driving quality education to the nooks and corner of the country. With government initiatives such as "Digital India" with a vision to transform the country into a digitally empowered society and knowledge economy, ICT solutions will play a more critical role not only in promoting education but also towards driving digital literacy.

Social Media

The social media is also a learning tool about the spread of 'digital learning' in the country. The impact it is having on the very educational process followed for years in India and now is being carried forward to impact the rural population as well.

Growth of Digital Education

Learning platforms, softwares 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 learnings, take assignments and manage their schedules.

Personalised and Adaptive Learning

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. The 'one size fits all' teaching model is being supplemented by adaptive, personalized learning pedagogies. Going forward, this will be the new trend in formal learning that will enable students to be technologically skilled and equipped for modern workplaces.

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 contexts of learning in digital mediums currently students are using videos and chats with the help of experts. 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.

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 smartphones. The smartphones user base in India continues to increase, in both urban and rural areas. The coming

as well as business and fine arts.

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, 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.

Advantages of Digital Learning



years will witness users accessing most of their educational content through internet powered smartphones in a massive way. Most educational content, including even online courses, will be optimized entirely for mobile devices.

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.

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 archive 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,

- With nearly a billion people on mobile phones and over 200 million mobiles connected to the internet, there has been a considerable rise in digital learning.
- The use of best-in-class content, real-time learning and feedback methods, and personalised instructions has encouraged online learning.
- People are stepping towards digital learning as the ed-tech firms are providing them the comfort of 'live and interactive' anywhere learning in digital format, through its online programmes.
- These online courses are affordable and



- easily accessible.
- Digital learning aims to break the numerous barriers that are preventing people from receiving quality education in the physically bound classrooms. Thus, we can now strongly say that today's education related centers are providing all the platforms available for reaching out to end-user right from ICT Classroom (offline/online) to educational apps, SD Cards, tablets, 3-D learning, AR, VR, Robotics in education etc. With access to Smartphons and growth of the Internet usage in the country, the scope for development of the e-learning industry is immense. The pace at which changes happen in today's world is truly unprecedented. Education and Technology are sectors that effect changes and are in turn affected by changes around them. The best scenario is to be innovative and have the ability and willingness to adapt to new developments surrounding them. However, it must be noted that technology is just an enabler, requiring a human to operate it and make use of it. Thus, the perceived advantages or for that matter disadvantages of technology, when it comes to students, is merely an outcome of the way technology is used or handled. The outcome of any technological intervention is dependent on the manner and purpose with which they are put to use. What is important is responsible use of technology. Students should use it intelligently to learn more effectively. It will help in mapping the requirement of a child; assess his/her learning outcomes as well as make learning more receptive.

