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Digital education: Scope and challenges

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Abstract

“Technology can become the 'wings' that will allow the educational world to fly farther and faster than ever before; if we will allow it.”

- **Jenny Arledge**

In India, from last few years there has been a considerable rise in Digital and Live Virtual Classrooms at different levels of learning. With evolution of technologies such as cloud, virtual data centres and virtualization there is huge potential for technology to be integrated with the Education Industry. The purpose of this research paper is to give overview of digital education, benefits of digital education in India, the future scope and possible challenges of an Indian society for moving towards digital education.

Keywords: digital education, Scope of digitalization

Introduction

We are running into the 21st century where technology knows no bounds. This is the phase of radical development where technology is taking over every niche and corner. Smart phones, laptops, and tablets are no more unknown words. During this phase the education system is evolving for the sake of betterment, as this generation's students are not born to be confined by the limits of simple learning; their curiosity is vast and cannot be catered with educational systems that were designed earlier. If we kept on teaching our children the way we taught them yesterday, we would deprive them of their tomorrow. Our old educational system lacks the capability to stand a chance in the 21st century. So we are compelled to use digitization in our educational system

Concept of Digitization

Digitalization means transferred all the face-to-face information delivered by an instructor to digital platforms. And Prepared digital form which aims to maintain the standards and increase the efficiency in learning; the content is enriched with features of the modern parameters of short;

- Audio/video
- Text & visual
- Animation
- Quizes
- Simulation
- Applications
- Interactivity
- To be able to measure/evaluate the performance.

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Scope of digitalization of education

The education system has two distinct options: to improve the quality and scope of education in high schools and primary systems, or to lower the standards in the universities. The latter is unacceptable, so forward thinking educators lean on technology to accomplish the former.

Competition for well-educated graduates is increasing every day

As the industrialized world is constantly striving to lower costs, a more intelligent labour force is more efficient than is a force of poorly trained and educated workers. As education standards began faltering in the West, students in India and China were increasingly sought-after to fill positions that required the best-educated candidates. The US, highly aware of the shortcomings of the domestic system, developed the Common Core program to improve the quality of education. In addition to that program, which will go fully into effect this year, the US, along with other developed countries, has found itself increasingly committed to finding new ways – both administrative and technological – to improve the quality of its educational system.

Digital instructions are more engaging to today's students

Over the course of the last couple of generations, the forums in which our children develop have changed dramatically. Fewer children find books appealing today, primarily because they have grown accustomed to getting their information (and stimulation) from tech-based sources, such as television, video games, and personal electronic devices. According to a 2012 UK study of young people by the National Literary Trust, the number of children who read books not required in their schooling has dropped a full 25% during the last decade, with only about 25% of children choosing to read of their own accord. According to Trust Director Jonathan Douglas, this represents “a significant social and cultural trend which needs to be addressed.” But where the trust stresses that greater impetus needs to be put upon encouraging children to read books, it is arguably more realistic to provide literature in a format which readily appeals to children. The format for the future is electronic, in the form of e-readers, tablets, and even video presentations - all of which present information in a more dynamic form than is possible with printed text. Furthermore, a lightweight e-reader, capable of storing hundreds of books, is much easier for a student to manage than a stack of textbooks, which only serves to add to technology's appeal.

Budget constraints encourage the use of e-textbooks

Due to lingering global economic difficulties, academic institutions and parents of school-age children are facing more stringent budget constraints than they have encountered previously. One area which is ripe for cost cutting is among the textbooks we use to teach our children. Whereas printed books must be printed, bound, packaged, shipped, stored, distributed, and replaced when they are worn, increasingly popular e-books incur virtually none of these costs. By purchasing licenses only for students who actually use the books, a single download can serve an entire student body, with the only cost being the license

itself. And while readers are currently more expensive than paper books, prices for the technology continue to decline.

Digitized texts and study materials can be more up to date than print versions

Schools are faced with the need to replace outdated textbooks on a yearly basis, with some editions becoming obsolete even before they reach the students' hands. And with each revision, there is the cost of producing, shipping, storing, and issuing the full revised version. With digitized study materials, any revisions that are required can be implemented at little cost, and the revised version downloaded to each reader almost instantaneously. The cost savings are astronomical, and students always have available the most current information possible.

Publishers are already on the digital bandwagon

If one doubts that digitized material has found its place in the literary marketplace, even a casual perusal of online booksellers will show that the digitization of literature is well under way. Titles for sale at Amazon, Barnes & Noble, and other online retailers are increasingly offered in both print and digital formats and readership of e-books has continued to rise. According to Bowker Market Research, as reported by Publishers Weekly last September, e-books accounted for a full 14% of all consumer spending on books in the first half of 2013, and while the pace of increase as a percentage of total book sales has slowed somewhat, it still continues to rise.

Just as some scoffed at the notion that horseless carriages could eventually replace the horse and buggy, traditionalists proclaim that digitized books will never be a significant factor in literary and educational circles. And just as happened over a hundred years ago, the nay-sayers are being proved wrong.

There will always be printed books – just as there are still many horses – but they may ultimately be relegated to areas where their unique aesthetic appeal and functionality are best realized. In education, digitized versions will continue to find their proper place, aiding a new paradigm that uses technology to bring knowledge to students in formats they relate to.

Challenges and Measures

Yet, there is a long way to tread before realizing the actual potential of Digital Education in India. Some of the prominent hurdles are Digital Literacy & Infrastructure. The majority of the Indian population still does not have the required internet bandwidth and many are illiterate in digital terminologies and devices.

Less than predicted results are achieved through ventures like e-chaupals because of audience ignorance of the technology. Government of India initiatives like NOFN (National Optical Fiber Network) connecting 5 lac villages via broadband till 2017, 25 cities by Wi-Fi by the end of 2015, is a significant step in this direction. But a lot needs to be done in mobile wireless internet and setting up skill centers especially in rural areas.

Innovation should also be poured into making digital education more interactive and robust. Limitation in teaching numerical analytics and empirical subjects like Mathematics can be overcome by appropriate classification of content and tutors trained and specialized in responding to dynamic and spontaneous queries of students. In

developing countries like India, digital education comes with a premonition of “Digital Divide” and therefore government should make efforts to include all stakeholders in this initiative to make it “inclusive & sustainable” for all. Almost 85% of the Indian population does not speak or write English. Creation of a Hindi (other supported local languages) internet to tap the sub urban or rural market potential can prove to be a key element to penetrate deeper. Also, affordable internet access, data enabled devices and appropriate internet plans can play a significant role in tapping the market.

Here, a special emphasis must be laid on Security features like examinee verification, plagiarism etc. to uphold the independence and integrity of the education system. Active campaigning, informative sessions, technical workshops and a multi-pronged approach by all stakeholders is needed to bring about Digital awareness and change trends like Distance Education to Digital Education.

Note: Facts and Impressions carried out while writing this article is reference to some daily newspapers likes “The Hindu” and magazines like” India Today.

Conclusion

Digitization has no doubt changed our education system, but we cannot say that it has diminished the value of our old time classroom learning. Neither do we want something so priceless to turn into dust. The best part about the digitization of education in the 21st century is that it is combined with the aspects of both; classroom learning and online learning methods. Walking hand in hand both act as a support system to each other, which gives a stronghold to our modern students. Digitization in education has also proved to be the right method for saving resources. Online examination platforms have restricted the frivolous usage of paper, directly confining the cutting down of trees. This way the digitization of education industry in the 21st century proves to be a boon to our society

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