Digital Education: Scope and Challenges of a Developing Society

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The role of education in an individual’s personal growth, skill development & democratic responsible behavior (his/her rights and duties to be exercised in terms of learned human resource pool) thereby contributing immensely to the overall prosperity of a nation, is irrefutable.
Although, India scored well in improving from mere 12% literacy at the time of independence to 74% as per 2011 census, it still lags behind the world average of 84%. Targeted programs at primary and secondary education like SSA (Sarva Shiksha Abhiyan) have definitely proved beneficial to some extent but a lot needs to be done to truly educate India.

Data figures and enrollment ratios might have presented a rosy picture but one needs to invigilate the dark corners of Indian education. Apart from the basic twin ills of ACCESS & AFFORDABILITY which keeps a significant child population at bay from school doors, we need to enquire about the level and quality of education one gets imparted with. India has a significant drop out ratio with some BIMARU states exceeding 50% before Std. X.

Primary reasons relate to student’s personal and family interventions. As per a 2014 study by a Delhi based NGO Pratham, which surveyed school children across 500 districts, a fifth of 10 year olds could not read sentences, 50% of 7 year olds surveyed, could not read letters and more than 50% of 14 year olds could not perform simple arithmetic like division of numbers. A similar study on higher education last year estimated that fewer than 10% of graduates with Masters Degree were employable. Prevailing wide differences in India in terms of economic, social and gender divide makes the situation further worse.

Quality of education in government run schools with a skewed teacher-student ratio is not appropriate. The lack of basic amenities like library, clean toilets, and playgrounds further add to the drop out ratio. Private schools in a rat-race to raise margins commercialize education and display a pathetic apathy towards admitting children from the weaker sections as specified by the RTE act. In the present ambience of poor
teacher-student value connect and stress on conventional rote-learning the student is actually immune to the passion, zeal and excitement that must be part of their learning.

The few leftovers of natural curiosity in children are muted by ignorant parents who stress on heavy schools bags and out of school tuitions. Without paying any heed to innovative learning and practical aspects we are shrinking the magnanimity of academicians and researcher brains into small potholes of job-seekers. Degradation of talent in this vicious silent manner in the past few years has amassed a huge pool of degree-holder, unemployed youth in India. Poor state of research in the country is a true reflection of this fact.

**Digital Education: A Positive Intervention**

In this gloomy picture of education in India, the ICT (Information & Communication Technology) revolution has paved the way to introduce some breakthroughs in different spheres like banking, education, health and the like.

Education globally is one of the significant sectors to witness revolutionary changes in recent times. Digital Education is the panacea for this anathema of education all over the globe. It is in particular a blessing for developing countries which chronically suffer from ailments of access and affordability. With wise coverage over various means of communication it becomes a natural choice to learn even for those in the hinterlands.
Primarily Digital Education has 3 components:

1. The content

2. The technology platforms

3. The delivery infrastructure

The Indian IT sector organically or otherwise holds enough capacity and character to provide excellent digital content and supporting technological platforms. With the advent of several corporate giants like TATA, BSNL & RELIANCE in digital education and the subsequent money flow this sector is gearing up for some quality movement. But innovation is one thing that has no end and therefore would always invite different stakeholders like Government, Content experts, Technology firms, Users, Teaching community etc. to come together to collaborate and invent cutting edge technologies and methods to facilitate this sector’s meaningful growth. Government and private players need to come together to bridge connectivity and accessibility issues.

Digital Education showed its face in the 90s in developed economies like the US. With device manufacturers mushrooming early in USA and other developed countries it started penetrating gradually. Developed nations have started realizing the cost benefits of going digital and are acting with an eye on the future. For example, Stanford University has introduced a digital course in masters in electrical engineering. According to research by Harvard University, more professors are selling their lectures and notes to digital campuses. Society, with some challenges related to internet connectivity though, is ready to accept the change in the developed nations.
Hanging Fruits in India

In India, where mobile penetration is nearing a billion people with over 200 million connected to the internet, and this expected to reach 550 million by 2018, the potential to digitally educate the masses seems very rich. In the past 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, data centers and virtualization there is huge potential for technology to be integrated with the Education Industry.

Besides its cost and access advantages, digital education comes as a win-win for all. Education institutions see the rapid rise in enrollments and added revenue. Students view this as a flexible option allowing them to study as per their time and pace. Teachers too find it convenient to prepare their learning plans well aided by technology. Teaching becomes a smoother experience with a perfect mesh of personalized packages having a blend of animations, gamification and elaborate audio-visual effects.

Digital education is fun learning for all cadres and particularly effective for child learning as the innovative audio-video feature boosts the cognitive elements in a child’s brain. The INFO-TAINMENT combination involved in digital learning makes it more practical, applicable and relatable to our life and surroundings in an interesting manner.

The Reform Push, expanding eLearning, reduction in costs due to satellite technology (VSAT) are all strong catalysts for a high potential business opportunity in India. This is where EdTech companies
like Magic Software can add to the growing repository of Digital learning Objects (DLOs) and technological platforms available to learning. Some data to help tap the Indian potential...

- India Market Size– Rs 3.3 trillion (2011), Rs 5.9 trillion (2015), as reported by FITCH

- Highest growth rate area is Asia (India being the key) at 17.3% well ahead of Eastern Europe, Africa and Latin America, according to Docebo Report 2014.

- Internet users to double by 2018; rural users to rise by almost 40% of the total, by Internet & Mobile Association of India

**The Way Ahead: 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”