Digital Classroom: The Future of the Current Generation

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Abstract: It is years together, we are getting educated day-by-day. The process of just seating in classroom and learning will have extremity. There are several mediums & resource of education. In modern days, diversifying technology is at the top. The digitization is the exact solution for simplicity of learning methods. Great things are promised by technology with it also to transform how people collaborate and communicate with each other. Research for years on classroom technology, its adoption into the particular field seems to be very little. A modern classroom is basically an Information & Communication Technology based classroom. This aims at converting traditional classrooms into interactive sessions by combining best hardware with syllabus-compliant, multimedia content. Education sector shall have drastic change. In many colleges, computers will be heavily used by teachers and students. This article explores this theme and discusses how a digital classroom is basically an ICT-based classroom solution, helping to convert traditional classrooms into interactive sessions.

Keywords: Digital Classroom, ICT, Teacher, Student, Parents.

I. Introduction

"Education" is just a means of the drawing-out, or development of the faculties that commence in school and college; but it does not end there. Here one learns the basics and gains knowledge on various subjects. Or in factual words, one learns the finest techniques of acquiring knowledge. But we cannot end up with this as whole of education but surely a preparation for education. Our education should never be "finished" until an individual life is concerned. This education system is now getting technical with many private Institutions promoting lesser use of pen & paper and larger use of computers. There are several areas where technology has made little impact. The classroom is one such domain. This technical methodology is now helping us in the way we do business, the way we are entertained, the way we socialize, the way we travel.

Active Learning is one method as part of digitized education. It is one very effective way to reach. Classroom Response Systems (CRSs) is way promoting Active Learning. CRS is defined as one computing systems that allows giving students activities and electronically collecting the results in class. It is most simplified method of bridging the gap between subject, teacher, student and parents; finally satisfying all the minds.

II. Digital Classroom

We are very well aware of Information & Communication Technology (ICT). A digital classroom is basically an ICT-based classroom solution, helping to convert traditional classrooms into interactive sessions with the help of best hardware with syllabus-compliant, multimedia content. Digitization of classrooms includes curriculum on digital content management and infrastructure to support technology. This modification includes: setting up of infrastructure and technology in schools with it providing digitized course-ware and maintenance support to teachers and the management on technology usage and conduct special interactive sessions.

In a digital classroom, sets of computers are installed in classrooms and connected to the network. The classrooms are autonomous and have continued to develop independently. Classroom Response Systems (CRSs) is a parallel method with digitized technology. There are two main categories of CRSs, those that focus on rich digital ink input and those that rely on multiple choice or textual responses. The most feasible way to deploy CRSs in the classroom

is to utilize the mobile devices that students already carry and to develop techniques to successfully integrate a diverse set of devices into the pedagogy developed for using CRSs.

In short the digitized classroom mean by

1. Use of projector with tablet

2. Using less paper

3. Use of digital resources and digital tools

4. Development of digital ethics and honor online, and respect for fair use for education

5. Teacher-collected or teacher-created resources

6. Inquiry, Project & Problem-Based Learning

7. Student work is published for a wider audience

8. Digital Literacy and Multimedia

The three important reasons to consider a Digital Classroom is Easier Access, Better Information and Evolving Solutions

Active Learning

Active Learning is a theory of teaching. Greek history with great philosophers is the method's base. These days believed that interact directly with them is the most effective way to teach people. The interaction was probing the students with questions and having them think about and come up with the answers themselves. Active Learning is not simply about engaging students with the material, but is focused on helping the students to build mental scaffolding to place their knowledge

Active Learning is an active process wherein the learner absorbs the knowledge given, fitting it into the mental frameworks and ideas already constructed by the learner and also using the new knowledge to build new mental models and structures.

International view Classroom Digitalization

In countries like the UK, US and Australia, more than 90% of schools in are using technology-enabled interactive whiteboards. South Korea is next in the list. The South Korean government is investing about $2.4 billion in K-12 schools to implement digital textbooks by 2015. Australian public schools are benefiting from the federal government's $2.5 billion Digital Education Revolution initiative that provides up-to-date technology such as interactive whiteboards and virtual classrooms. New Zealand schools have set up digital classrooms in last five years. Top 15 educational technology companies in the US are discussing how to make digital classrooms a reality in schools across America within the next five years.

Education Boards, Government and School Management

Considering young India in respect of digital education is so strong that school boards steps are concentrating on the adoption of digital education in schools. The Central Board of Secondary Education (CBSE) has already instructed and started affiliating schools to install digital classrooms right from primary to secondary level for every relative subject. All the respective education boards instructed to all the school principals about schools should have digital classroom after CCE evaluation system. The board has its own limitations and freedoms on how it wants digital education to be embraced by schools and students. Factually considering an exact roadmap for the futuristic view, at a broad level, the directives are clear indicators that our policymakers have accepted the criticality of digital education.

It is quite huge decision and a very drastic change while implementation, training and adoption of a completely new teaching methodology by a school against the capital been invested. This can walk up smoothly only when both the school management and teachers will look out for buy-ins. Though the initiative of schools will matter but more

explicit advocacy from state and central governments coupled with a sense of urgency and palpable pressure is also a pre-requisite.

This kind of government encouragement for adoption of advanced teaching technologies, viz. digital learning and interactive classroom modules, on the other hand, education service providers are aware of more thirst and are sensing immense potential in the country's evolving e-learning market. They are very well aware that the market is not just restricted to private schools anymore.

The government has initiated its work through providing computer labs in schools. Every school will have a server, five PCs, printer and internet connectivity. The installation and maintenance of hardware, content and training will be outsourced to a private party by State governments. The information and communication technology (ICT) business is tender-based. It functions under the build/own/operate/transfer model.

The 11th Five-Year Plan had allocated R5,000 crore to be spent on information and communication technology (ICT) infrastructure in schools, including labs for computer-aided learning and edusat centres for distance-learning programmes. This is the actual need even.

The interiority of the government says, "India currently spends $400 per student compared to $10,000 per student in the US. We spend around 4% of the GDP on education services, which is significantly lower than some of the more developed nations. With the right to education Bill, there will be a lot of pressure on the government to increase the expenditure on education."

The Bridge? – Teacher, Student & Parents

III. Teacher

Teaching is lot about interaction between student & teacher. Teacher while teaching should use the combination of visuals and the traditional methods to simply the method of conveying point. Teaching others requires a person to anticipate the questions of others, requiring him/her to fill in the gaps within his/her knowledge and understanding. For mathematics, a teacher is a must but for biology and chemistry, visuals do play an important role.

Providing teachers a broad, flexible and responsive methodology to streamline their teaching and make it more meaningful, only Digital classrooms shall modernized it. This will satisfy not only the teacher but the concern students also because it will take very less time for them to grasp. Traditional 'blackboard-and-chalk' method, the teachers are able to move away from by making use of interactive teaching tools. This will then make learning a real-life experience. The ICT tools helps teachers customize their teaching sessions, keeping the learners' pace in mind. Quality teacher can be the great achiever by the support of classroom technology. This technology will surely help instructors to follow the best educational practices and can enable interactions which wouldn't have been possible otherwise.

IV. Student

Digital classrooms make learning more entertaining, interesting, easily graspable, understanding and enjoyable for students of the entire cadre. Their views and attitude will be more optimistic and positive towards learning. Audio-visual learning enables them to understand and retain even difficult concepts better. Overall information retention becomes much higher and more interesting for theoretical subjects like history and geography with visual aids. A digital classroom creates new opportunities and innovative ways to learn. On the contrary this platform can overcome the relatively less interesting parts of education and learning.

The digital classroom, for Students, can now have contact with any good teachers, educational content and a immovable learning experience anytime, anywhere. Indian education system, here, students can begin using ICT tools for getting an interactive experience in subjects such as mathematics, biology, chemistry, science and more.

If look out for a feasible, long term, self-sustaining solution to have the students themselves be responsible, they themselves should carry their own technology into the classroom – just as they bring pencils, papers, and books to class today.

The future of the current generation will be groomed in technology, and the use of ICT will enable the students to get familiarized with the latest technologies. This can then be helping them in gaining a competitive edge for the future.

V.   Parents

Parent associations, too, must demand faster conversion to digitalization to ensure that no child is left behind. Digital technology not only will bridge gaps between in and out of school but also help reducing the home-school divide, thus improving communication with parents.

Prime necessities

- Students need to be proficient computer users

- Facilitate with the knowledge of computers and the internet

- Big screen projector for stress-free readability

- Electronic interactive whiteboard system, along with a computer and UPS

- A digital library for every subject

- Every class should have an electronic response system to calculate the time taken by students to understand the lesson and a resource person to help teachers in digital classrooms.

Should take over /long way to go

Why to introduce technology into the classroom? Firstly, it can relieve the burden on the instructor regardless of his/her skill level. Secondly, technology with its potential permits exposes good teachers to scale their abilities. This is to a larger audience and also reaches more people, more easily than with conventional classroom practices

The universal major problem in implementing a digital classroom is cost. The facts are: The market for digitization of classrooms touches the investment around Rs 1,500 crore in public schools and Rs 25,000 crore in private schools. Its initiation and the demand is around 7,50,000 classrooms and, at present, only 80,000 classrooms are digitized. The classroom digitization industry is growing at a rate of 50% year-on-year. Unfortunately, only 10% of the classrooms are digitized in our country as of now.

The market holders are using the powerful channel of 3D animation videos to explain difficult concepts like formation of block-mountains or volcanic formation. And, Institutions are using the available technology to explain and simplify concepts in subjects like Chemistry, Physics, History, Biology and Science. Educomp has already established digital classrooms in over 12,000 schools spread across 560 districts in the country and the number is growing at almost 20 schools a day. Analysts expect this market to grow 10 times in the next five years. It is very clear that not every school district can afford the basic software licenses necessary to outfit even a moderately "digital" classroom. However, some believe that the digital classroom concept has still not caught up.

The darkest side – an analysis states that, India has around 10,00,000 schools. Of which 90% are public schools meaning 1,00,000 are private schools, and out of which only 80,000 are digitized. Moreover, companies like Pearson and Educomp target either the tier-1 schools that have a fees above R4,00,000 per annum per child or the tier-2 schools. Concentrating on the small-town schools and government schools is a big issue even. India has been off the block much earlier than expected on this score. Although there is a ray of hope but the way to go is quite long.

VI.   Conclusion

It totally depends on the Institution's decision of making all its classrooms digital classrooms in coming five years, otherwise the change will never happen. Converting every conventional classroom to a digital classroom will be the solution and that too in effect, rather than aim for symbolic transition which may or may not happen depending on resources at the institutional level. It is definitely not the work of overnight. Coupling of proper and needed things

will be a beginning. First is a qualified and stated intent to convert all classrooms into digital classrooms with a cut-off date. Second is to create a clear roadmap to implement it.

The illiteracy, from a few years from now will be counted on the basis of unawareness of computer literacy despite having professional/non-professional degrees and diplomas. And that is because by then the rest of the world would have moved much ahead with digital education; our children despite having completed higher education will be left behind. Although will all the major challenges, we hope that the digital form of education reaches every school child in every small town of India. Because, that is where it is needed the most!

 It is obvious that the availability and facilities provided by new ways of learning for both the student and the teacher. There will be shared working space and resources. Better access to information, promotion of collaborative learning and new discoveries.

Experts say in states like Tamil Nadu, Andhra Pradesh and Punjab, the acceptance for digital classrooms is also high. Among the major players in the organised sector are Educomp Solutions, NIIT, Everonn Systems, CompuCom, Class teacher Learning Systems, Tata Interactive Systems (TIS) and Birla Shloka Edutech. Thus it is this digital aged time to grip the digital classroom.

VII.   REFERENCES

1. Srikanth B Iyer (Oct 15 2012),Digital classrooms in the digital age,
    http://www.indianexpress.com/news/digital-classrooms-in-the-digital- age/1016698/2
2. Shantanu Prakash (Jul 23, 2012), Empowering young India with digital education ,
    http://www.indianexpress.com/news/empowering-young-india-with-digital-education/977969/5
3. Diksha Dutta (Jul 9, 2012), Time to teach the digital way?
    http://www.indianexpress.com/news/time-to-teach-the-digital-way-/971867/4 1.
4. Debojyoti Ghosh (Sep 19 2012), E-learning clicks with Indian schools, but a long way to go,
    http://www.indianexpress.com/news/elearning-clicks-with-indian-schools-but-a-long-way-to-go/1004690/3
5. Ardhra Nair (Oct 22, 2012), Modern classrooms, online courses — tuitions come a long
    http://www.indianexpress.com/news/modern-classrooms-online-courses---tuitions-come-a-long-way/1020272/3
6. Ani Bally (july 09,2012),Digital Classroom – legal education,
    http://edudemic.com/2012/07/digital-classroom/ (01/02/2013)
7. Kalashankar (2012),Profile of a Digital Classroom   International Journal of Applied Engineering Research, Vol.7 No.11 (2012) © Research India Publications; http://www.business-standard.com/india/news/digital-classroomsfutureyoung-india/425889/
8. Roberts, Malcolm   (2007) ,The critical success factors involved in the implementation of a digital classroom in New Zealand http://unitec.researchbank.ac.nz/handle/10652/1283   (01/02/2013)
9. Michael B. Eisenberg and Doug Johnson (2002), Computer Skills for Information Problem-Solving: Learning and Teaching Technology in Context. http://www.gpo.gov/fdsys/pkg/ERIC-ED465377/pdf/ERIC-ED465377.pdf (01/02/2013)