



## Modernization of conventional Indian classrooms

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### Abstract

Education is central to development and a key to attaining the Millennium Development Goals. It is one of the most powerful instruments for reducing poverty and inequality and lays a foundation for sustained economic growth. The Government of developing countries are formulating policies to help countries integrate education into national economic strategies and develop holistic education systems responsive to national socio economic needs. The impact of technology is and can be extremely significant as far as the education sector is concerned. It is only through the use of technology that we can negate the importance of physical presence and reach every child in every corner of this country. This flattening of the world will help us in reaching out to not only various schools and children of the country but the world as well. The use of technology also makes the entire process of learning not only interesting but more impactful as well. The education sector has, unfortunately, always held a reputation of being a laggard as far as technology adoption goes. The paper trying to delineate how information technology can help to improve the quality of the education system in the conventional Indian Classrooms.

**Keywords:** education, information technology, tech- friendly, development, computer

### Introduction

The real meaning of human resource development is that education must play a significant and domineering role in remedying imbalances in the socio-economic fabric of the country. Basic education greatly contributed to the quality of human life especially with regard to learning levels, gender imbalance, women empowerment, nutritional and health status of the children. The numerous initiatives are taken up by the government by placing emphasis on decentralization of the education system and making the people partner at the grass root level. Ensuing, universal basic education has vastly contributed to social justice and equity and participative economic growth. The scheme of government to universalize the elementary education system by community ownership of the school system has increased the demand for quality basic education all over the country and seeks to ensure access, retention and quality improvement further. India has a vast population and to capture the potential demographic dividend, to remove the acute regional, social and gender imbalances, the Government is committed to make concerted efforts for improving the quality of education as mere quantitative expansion will not deliver the desired results in view of the fast changing domestic and global scenario. For this purpose, the Government has taken/proposed a number of major initiatives during the XIth Five-Year-Plan and Information and Communication Technologies (ICT).

### Problems Faced at School Level Education

Despite impressive achievements over the past years, significant concerns remain. According to the report of Indian Education together with District Primary Education Programme (DPEP) Baseline Survey, only six to eight

students qualify for higher education out of hundred students enrolled in class one. Majority of them qualify in third division and have poor performance especially in English, mathematics and science subject. The major problems at school level education systems are given below.

- 1. Insufficient Infrastructure and Facilities:** The major reasons which hampers the good education system include the small classroom size, inadequate sitting arrangement, poor quality of management and facilities such as drinking water, sanitation, medical, computer and language labs, insufficient quantity and quality of teaching staff, distance from the schools, school expenses etc. The demand for child labour still prevailing in rural India too reducing the number of students in the schools.
- 2. Insufficient Skilled Teachers:** There are large number of under qualified teachers who need further professional education and training as they work. It was estimated that 51 percent of teachers are either higher secondary qualified or below, 3 percent are graduates, 10 percent are post graduates and only 44 percent received in –service training. This lead to teachers not to get benefited from the new advanced tools and techniques and have to continue with outdated materials and tools.
- 3. Student Teacher Ratio:** The teacher student ratio has changed unfavorably over the decades especially in primary education and result in increase in work load of the teacher. The size of the classrooms are increasing but the number of qualified teachers are limited and creating an acute problem of skilled educators.
- 4. Deficient of Support Material:** Teachers are largely rely upon conventional tools like chalk and blackboard for teaching and have almost no access to other supportive

tools like lesson plans, supplementary text books, power point presentations, etc techniques and tools.

- 5. Focus on Theoretical Aspects:** There is no mechanism to ensure that curriculum keeps pace with developments. The material taught is too theoretical and highly focused on learning by rote. Vocational aspects are not adequately covered.
- 6. Outdated Study Material:** The books are not timely revised and contain many times factual errors, students find it difficult to relate examples and illustrations and there is often a significant difference between textbooks and teaching material used by private and government schools.

### Modernization of Indian Classrooms through ICTs

The impact of technology is and can be extremely significant as far as the education sector is concerned. It is only through the use of technology that we can negate the importance of physical presence and reach every child in every corner of this country. This flattening of the world will help us in reaching out to not only various schools and children of the country but the world as well. The use of technology also makes the entire process of learning not only interesting but more impactful as well. The Information and Communication Technology plays a vital role in the success of a child's education. Here are some of the advantages that technology helps provide for children today:

- 1. Outreach to Every Child:** With the growing size of the classroom it becomes challenge for the teacher to manage and reach every child in the classroom and deliver quality lecture to them. ICT is making it possible for teachers to reach more students and prepare them for real world.
- 2. Enhance Teaching Quality:** Not only does technology benefit students in the education system, it also benefits the educator. In India the student teacher ratio in primary schools is 40.20 while in secondary level it is 32.70 as per the data of 2007 sources World Bank. This shows an acute shortage of trained teachers. Apart from this there are large numbers of under qualified teachers and many more need further professional education and training as they work. With the use of online teaching methodology the teachers can acquire new skills, take suggestions from the worldwide education experts and improve their teaching abilities.
- 3. Flexible Education:** Information technology allows teachers and students to comment and discuss sections of text books, link supplementary material for further study, share lectures, exercises, assignments, tests and so on. It also helps in participatory development of training material for helping teachers and administrators update and enhance their skills.
- 4. Supple Way of Data Collection, Storage and Distribution:** ICT tools allow experts, teachers and students to provide feedback on the updates needed in the curriculum. Tools that allow sources to create, in a timely manner, high quality instruction material and supplementary material like text books and updates on new developments and mechanisms for sharing instruction material amongst schools. ICT can help in improving the instruction material. It helps to minimize the errors which

are frequently left while publishing and frequent updates can be possible. It also helps in prompt delivery of the books through electronic format.

- 5. Continuing Education:** Technology has made it possible for those who are not able to go regular classes in schools due to socio and economic pressures as well as who wants to add little more in their education. Such students can continue their studies while sitting at their premises. The information technology will help them to access of formal education in virtual class rooms. Technology brings the learning rights to every child.
- 6. Meeting Special Needs:** Technology with special needs students and students with disabilities have been able to achieve in areas and ways that would not have been possible. Technology relates individualized learning environments for students and really can play a major role in special need ones.
- 7. Workforce Skills:** ICT has served students well by providing them skill and knowledge of the field they are interested in their secondary schooling only. Many courses like hospitality, computer engineering etc are now becoming part of secondary education curriculum. All this prepare them with the skill and knowledge they require to enter professional world.
- 8. Worldwide Collaboration:** IT has already begun as students communicate with others around the world via email, video conferencing and instant messaging. Many collaborative projects are also occurring in the shape of online collaborative websites know as wikis. These sites allow anyone that has permission to add and edit the sites information. The most popular wiki, Wikipedia, is use by many internet surfers today.
- 9. Electronic Devices to Facilitate Education:** There are numerous devices; software's are available in the market which can make the learning fast and interesting such as mobile technology, I-Pads, laptops, CDs, multimedia, simulations, videos, maps, etc. The Government are also trying its best to lowering down the cost of education laptops to rupee 500. This will help to reach ICT to every child in every corner of the country.
- 10. Online Textbooks:** The financial burden the cost of textbooks put on the education system is staggering. New textbooks are purchase every couple of year only to be replaced a few year later with the new cutting edge book that is not much different from the previous. Many companies are beginning to create CD-ROM and online versions of their books. NCERT has also come up with the online version of its text books which can be downloaded within few seconds.
- 11. Education at the Door Step:** Tata Sky has revolutionized the Indian education system through its active learning package on the idiot box i.e. television. This has supported the conventional classroom teaching in a very well manner. The programmes like active English; active education packages are not only helping the children to learn fast but catching the attention of adults too. Where children as well as adults can learn English and many subjects easily and support the conventional classroom teaching.
- 12. Education Collaboration Networks:** Education

Collaboration Network (ECN) approach can serve the modern education system. Teachers in rural areas can download material through a community portal, and print out notes and exercises to be used in their classes. The quality of the content is self-regulated in a community portal like Wiki projects. Similar way the materials receive feedback and review by the users, to ensure good quality contents. The material is also improved by the team of experts who continuously monitor the quality of the contents added by the users in the portal.

**13. Streamlined Administration:** Departments of education and school board are beginning to realize the power of streamlining educational data. Marks, reading levels, medical history, achievements, learning disabilities, attendance and many other important data about students is beginning to be compiled into streamlined databases that will help educators understand their students better and customize their lessons to improve achievement.

### Prospect of ICT based Education System

The future of ICT is very bright and will continue to play important role in education system. The future prospect of Indian education system include the below given stride:

- 1. Digital Format and Subscription:** In the future we will probably find school boards paying a yearly subscription to the textbooks of their choice, which will allow their student to have unlimited access to the books via the internet or downloaded directly to their on their laptops at a fraction of the cost of providing a physical text for every student.
- 2. Virtual Classrooms:** The teachers are taking virtual classes online. There is a great demand of qualified teachers to teach students sitting abroad. The company's are growing who hire the teachers for virtual coaching classes.
- 3. Instant Assessment and Feedback:** With the use of laptops and handhelds teachers are able to record their instant assessments of students instantly. Not only are the teachers able to document student's achievements quickly but with the help of virtual educational communities they will be able to give instant feedback to the student, parents, other teachers and administration.
- 4. I-Pads:** can be used by students which contain thousands of online books which can be read anytime and anywhere. Not just reading you can also see the meaning of new words by clicking the word. The synonyms, anonyms and many more applications can be used to make reading interesting for the students of all age.
- 5. Mind Blogging:** The blogging is also emerging as a popular tool for sharing knowledge. The student sitting in the America can comment and discuss the blog or essay written by a student in the rural Africa and so on.
- 6. Mobile Laptop Carts:** Instead of scheduling computer time to the computer lab, teachers are reserving these laptop carts bringing the computer lab to them. Imagine a large cart with 25 laptops shelved, plugged into outlets within the cart. Only the cart needs an external outlet to power all laptops. This cart is moved from classroom to classroom and students are assigned a computer number.

### Conclusion

Education is not only an instrument of enhancing efficiency but also an effective tool of augmenting and widening democratic participation and upgrading the overall quality of individual and Society. India has a vast population and to capture the potential demographic dividend, to remove the acute regional, social and gender imbalances, the Government is committed to make concerted efforts for improving the quality of education as mere quantitative expansion will not deliver the desired results in view of the fast changing domestic and global scenario. For this purpose, the Government has taken/proposed a number of major initiatives during the XI<sup>th</sup> Five-Year-Plan and Information and Communication Technologies (ICT).

Even though many of these technologies are available today, and are beginning to be used in some classrooms, it gives us an idea of where we are heading. What educators and administrator need to is to make sure that we keep the art and the human aspect in education and not let technology and ourselves turn it into an exact science that suffocates creativity and unique teaching styles. The possibilities endless we only need the creativity and willingness to embrace these new tools. Educators need to realize that student is much more secure typing up a paragraph around the computer instead of writing it over a piece of paper. These educators have to turn out to be component of the engineering revolution in order to be capable to integrate training technologies into their classrooms. Blogging, web layout, video conferencing and joining on the web communities are just some of the methods educators can turn out to be much more familiar using the internet and technology era. In the nutshell we can say the future of India will be fashioned in her classrooms. While India has made great strides in improving its education system, much still remains to be done.

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