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Research Papers

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ISSUES IN USE OF ADVANCE TECHNOLOGY IN EDUCATION

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Abstract

The technology is shifting its focus from teacher to learner and also from teaching to self-learning. The new technology promises to enhance individual and institutional productivity. These tools enable quick and effective communication. Technology helps in the cre

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INTRODUCTION

Nowadays knowledge has become a primary resource which begun to impact human efforts in all walks of life. Education is essential to attain socio-economic empowerment of individuals. An individual can acquire capacity to take informed decisions through education. Moreover, education is considered to be driver for social re-engineering and cultural enrichment. For a nation, efficient utilization of knowledge and creation of new knowledge have multi-dimensional implications. Education holds very importance as India aspires to be a developed nation by 2020. However, the conventional system has proved unequal to the growing demands of learning. The recent implementation of government policies indicate that such inadequacies are inherent in the form and methodology of imparting education. So the conventional system of education must

incorporate additional dimensions. Considering this fact, the National Knowledge Commission recommended the application of Information and Communication Technologies (ICTs) to improve equitable access to quality education.

STATEMENT OF THE PROBLEM

Education holds very importance as India aspires to be a developed nation by 2020. However, the conventional system has proved unequal to the growing demands of learning. So it has become very important to emphasize on application of new technology in education. as the new technology promises to enhance individual and institutional productivity.

OBJECTIVES OF STUDY

- 1) To study the use of new technology in education in India.
- 2) To understand the challenges before adoption of new technology.
- 3) To highlight the overall issues related to advanced technology in education.

**KEY TERMS USED**

Higher Education, new technology, challenges, government efforts

**RESEARCH METHODOLOGY**

The present research paper is based on secondary data. While preparing the research paper, various references, journals and books have been used. The detailed list is given at the end of the paper.

**HUMAN RESOURCES**

Higher education system is lacking trained and qualified human resources in teaching. It is believed by the experts, that this problem should be solved with top priority. In some Universities, in spite of several advertisements, a good number of posts remain vacant. It occurs due to non-receipt of applications from qualified and experienced people. The experts, opines that, the actual advertisement and appointment ratio for teaching posts remain around 60-70 per cent. It indicates that the higher education system has not been successful in creating a class of good teachers, who shape the destiny of millions. This is the condition with about 400 Universities. The Chairman of National Knowledge Commission, Mr. Sam Pitroda has emphasized on the requirement of 1500 Universities in the country. If the government thought seriously to implement the idea, it would definitely confront with the problem of inadequate human resources in teaching.

**USE OF TECHNOLOGY**

The new technology has its impact on various sectors of economy like banking, security, aviation, industries and agriculture. Of course, there is no exception of education sector also. The technology is shifting its focus from teacher to learner and also from teaching to self-learning. The new technology promises to enhance individual and institutional productivity. ICT includes wide range of media like audio-visual, radio, TV, video-conferencing, computers, internet, DVDs, mobile phone etc. These tools enable quick and effective communication. Technology helps in the creation of distributed classroom even on the campus. The multi-media facilitate the presentation of most involved scientific or technological concepts. The technology has enhanced the reach of the word of mouth. It has also increased the effectiveness of teaching. Moreover, the new ICT has necessitated a change in teacher's role. The technology has made a teacher multi-skilled facilitator. So

continuous update of knowledge of teacher has become essential.

According to UNESCO the integration of technology into education helps in bringing quality education to everyone and everywhere, which is a major objective of education for all initiative. UNESCO also emphasized on recognition of innovative ICT in education practices which encourages even more educational innovations. The teaching techniques have changed rapidly since last some years. The quality education and excellence in achievement have become watchwords. The present teachers are required to work as techno savvy. They have to be professionally competent. They also need to be trained and equipped with technology. The technology facilitates learning process by catering to the varied styles. Technology also caters to the multiple intelligence of the students. Though the students get best opportunity to learn by working with other classmates, large number of students cannot think their best at that time. The technology can provide the best opportunity of learning to such students. Technology-based training proves to be helpful in increasing the geographic reach of training and also provide access to those learners who face transportation barriers. The new technology provides access of learning at any time of day or night. It ensures flexibility in learning.

**DIFFERENT TYPES OF TECHNOLOGY**

There are different types of technology available to assist teaching and learning process. Some of them can be stated as below.

- i) Laptop: This is a ready to use portable PC. It can be used for accessing mail and internet surfing.
- ii) Webcam Wall: This can be used to create effective visuals in order to introduce concepts of climate, volume etc.
- iii) Podcast: It summaries the class lectures. It can be delivered through an audio file.
- iv) Panorama view in teaching geography: This is an effective tool of teaching. It facilitates an all round view of the geography lesson.

The techno savvy are needed to integrate the technology for satisfying the growing demands of learning process.

**CHALLENGES**

According to K. Gulati and S. Dang (2011) many teachers lack a functional computer literacy foundation. Such foundation is important in building new technology and skills. According to

these experts teachers have low level of technological knowledge and computers and related technologies. Such technological education is not considered to be a part of their own educational environment. So it is suggested that teachers in India are required to encourage exploring the emerging technologies for teaching. In India the lecture method has been the most popular method of teaching. This most used method has suspended many technological innovations to restricted use. The imagination regarding the possibilities of technology meeting the demands of the learner has not been fully explored. The knowledge explosion has also been kept at low level.

There is a tremendous gap between the expectations and the reality of technology related innovative instructional practices. Such gap is found especially in learning practices in much of higher education. The technological cart has been put before the academic horse and a strong flip to push this around is needed. The academicians are needed to understand the technology. It's relevance in the classroom situation is also required to be highlighted. Nowadays, the techno savvy generation of students has emerged. Their increasing potential and aspiration for techno based learning must be taken into account. The teachers need to keep the pace with new generation learners. In this regard a famous quotation of John Cotton Dana may be placed, stating that "Who dares to teach must never cease to learn".

#### **GOVERNMENT EFFORTS**

Government of India has announced 2010-2020 as the decade of innovation. Reasoning and Critical thinking skills are necessary for innovation. Foundation of these skills is laid at school level. It is desirable that affordable ICT tools and techniques should be integrated into classroom instructions right from primary stage so as to enable students develop their requisite skills. Most of the tools, techniques and tutorials are available in Open domain and accessible on web. Further to circular number 7 dated 22 Feb 2010 wherein the [NCERT](#) had invited responses from teachers involved in the teaching and learning of Mathematics at the senior secondary stage to acquire the skills for using the World Wide Web, the CBSE would like to extend it to all subjects and all classes.

At Primary and Upper Primary level, focus may be on simple access to information and trying to compile different views and analyze them to conclude in one's own way. At the Secondary level,

gathering and structuring of data and computing to arrive at some reports may be taken up in any subject not necessarily Science and Mathematics. At the Senior Secondary level, when students are so exposed, they will get highly motivated to use ICT tools for taking up complex, multidisciplinary problems such as biochemistry, bioinformatics, environmental science, forensic science, nanotechnology, business intelligence etc. This may necessitate computing tools and techniques of generic nature as well as domain-specific. This is the time when the students and the teachers together will work in global competitive environment. The schools affiliated to the CBSE have been at the forefront of adopting the most modern innovations and practices to ensure there is a continuous enhancement in the overall quality of teaching and learning. The CBSE believes that it must bring the immense benefits of ICT and computing technology to every classroom across its fraternity of affiliated schools to improve academic outcomes of learners and to enhance the productivity of teachers in classrooms. This can be done by encouraging the use of technology in classroom teaching – [e-learning](#) and instant assessments which shall also go a long way in supporting its CCE initiative as well.

The Survey of ICT for Education in India and South Asia is the third in a series of regional surveys that began with [Africa](#), continued with [the Caribbean](#), and now includes the South Asia region. In addition to country reports, case studies and thematic essays, an [Extended Summary](#) report has been included. The Extended Summary briefly surveys each country's ICT4E policy and implementation, and discusses cross-cutting themes and key insights.

In nearly all countries, four main themes emerge:

- i) The importance of ICTs for training teachers. Much of this takes the form of basic computer literacy instead of how to integrate computers into teaching methods, but the emphasis on building capacity is important.
- ii) Secondly, providing and sustaining ICT infrastructure in schools, especially through public-private partnerships, is essential.
- iii) Thirdly, while ICT is an important part of formal educational institutions, it can be just as powerful in non-formal education settings, creating the opportunity for life-long learning.
- iv) Finally, several countries have very strong Open and Distance Learning initiatives that seek to provide mass education and overcome geographic or financial barriers.

Among the key findings is the importance of fostering an ICT 'ecosystem' with numerous constituent parts working in collaboration to provide opportunities for innovative educational approaches. ICTs can be seen as a platform to overcome the worst parts of education and learning while creating new opportunities and innovative ways to teach and learn. Meeting this demand can take many forms - from distance learning on a radio or TV, to newer devices like the widespread mobile phone. Through it all though, the importance of local context and systematic capacity building is key. Careful monitoring and evaluation, and coordination, are critical to success.

### CONCLUSIONS

In order to enhance our competitive edge, it is imperative to create educated India. This task is very challenging one. So an emphasis should be given on creation of learning environments. As technologies are used in interfacing for offer of education, high and low-end technologies should be blended. We also need to emphasis on virtual classrooms, individualized instruction and mobile learning. The technologies are seemed to provide solutions to all our genuine concerns. It is also true that the integration of technology into education and pedagogical techniques by no means hampers the learning by the learner. The new technology ensures the best and the latest knowledge available all around the world. It provide easy access to latest information and data to the teacher and taught as well. The update knowledge is imparted to the learners and the teacher gets into the constant learning mode by updating the information.

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