

# Integration of ICT in Teacher Education: Need of the Hour

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## Abstract

Use of information and communication technology in schools has taken a boom in the field of formal education. Information and communication technologies in schools have been subsumed in Rastriya Madhyamic Shiksha Abhiyan (RMSA). In schools ICT was launched in Dec. 2004 and revised in 2010 to provide opportunities for secondary stage students to mainly build their capacity on ICT skills and to make them able to learn through computer aided learning process. One of the components of this scheme is capacity enhancement of all teachers in ICT. In this light no one can deny the fact that until the teachers training institutes are not well equipped with ICT tools and using them thoroughly during teachers training programme, the capacity enhancement of teachers in ICT use may not be possible. To develop the effective classroom teaching, the use of ICT should be well woven in our teachers training programme to make prospective teachers more competent with enhanced capacity in this era of globalization. In India finance is the main hindrance to modernize the whole education system. If appropriate financial support is not given by the government to government aided schools and colleges, this task may not be completed and will create a big ditch between private and government institutes and so will be between students of both. MHRD and appropriate authorities should pay prime attention towards teachers training institutes and provide them financial support to be competitive in this era, as integration of ICT in teachers training is the need of the hour.

## I. Introduction

Use of information and communication technology in school has taken a boom in the field of formal education. Previously information technology (IT) was introduced to acquiring storing, processing, and displaying data and information. Later the efficient, cost effective and collective communication of data and information was introduced known as communication technology (CT). We now use the term ICT as both of these technologies became complementary to each other. Educational ICT tools are of three types i.e. input sources (document camera, PC, tablet, student response system, application software etc.). Output sources (projector, interactive whiteboard, display monitor, TV etc) and third type includes digital camera, recorder and other technologies. Teaching is somewhat imparting knowledge whereas learning is acquisition of knowledge and development of skills. It has been a matter of interest of research scholars too, to find out the impact of use of ICT on teaching learning process and as the outcome of researches there is no surprise to say that the use of ICT has changed the face of education worldwide. The use of ICT is the best way by which India's large population can be imparted knowledge and be learned effectively through both means of education i.e. formal and non formal. Class rooms in Indian schools are filled with more than 50 students which is quite a large number for a teacher to make effective learning of all of them but with the use of ICT tools teachers preparation time may decrease and student interactivity, concentration and comprehension of complex instructions may increase. Thus use of ICT is helpful in creating more effective environment for learning.

Under the guidance of Ministry of Human Resource Development, CBSE has also directed all the affiliated school to develop smart classes with maximum use of ICT in classroom teaching. In such advance conditions if our B. Ed trained teachers are not skilled in ICT uses how will they be able to fulfill the needs of schools in present scenario? The integration of ICT in teachers training program has become the need of the hour to cope with the revolutionary changes in our education system.

## II. Development of ICT Use in Indian Schools

Information and communication technology in schools have been subsumed in Rastriya Madhyamic Shiksha Abhiyan (RMSA). Now ICT is a component of RMSA. The ICT in school was launched in Dec. 2004 and revised in 2010 to provide opportunities for secondary stage students to mainly build their capacity on ICT skills and to make them able to learn through computer aided learning process. The scheme provides support to states and union territories to established computer labs on sustainable basis. One of the components of this scheme is capacity enhancement of all teachers in ICT. In this light also no one can deny the fact that until the teachers training institutes are not well equipped with ICT tools and using them thoroughly during teachers training program, the capacity enhancement of teachers in ICT use may not be possible. Now is the time when it has been proved that use of ICT is enhancing student learning and making teaching methods more effective it should be practically used in our training institutes. It improves retention power of students, complicity can be removed by making easy presentation increase comprehension power and make lesson more interactive and more enjoyable. Though it is very expensive to afford but without it there is no scope for prospective teachers. Its application has become a buzz word in education world that's why lots of efforts are being made by MHRD in this direction.

Our country is still in early phase of ICT adoption in our schools, but researches have proved that where ever ICT tools are being used the achievement of pupils have enhanced. The maximum use of their senses fills them with great motivation throughout their studies. Teachers are also stimulated to develop their teaching material, plan their teaching in more effective manner. The process of education has also become very effective with the use of ICT. Nowadays when there is a vast explosion of knowledge, our students and teachers should also be fit to face the global race. In traditional ways teachers may not give all the information and knowledge in less time and effective ways. The use of ICT gives pace to their presentation, students can develop more potential, more skills and acquire more knowledge in less time. When students develop their interest in subject they are fully motivated and develop self esteem, self confidence too. Here comes the need to integrate ICT in teachers training program, as without such training they can never make themselves resourceful and energetic for classroom teaching.

## III. Need and Significance of ICT Integration in Teachers' Education

Theoretical knowledge of technologies in education is not sufficient unless and until the practical aspect of teachers training is not

adopting ICT. Education technology is an essential part of our B.Ed courses. It encompasses e-learning, multimedia learning (MML), information and communication technology (ICT), technology enhanced learning (TEL), computer based instruction (CBI), computer assisted training (CAT), computer aided instruction (CAI), internet based training (IBT), web based training (WBT), computer mediated communication (CMC), virtual learning environment (VLE), m-learning and digital education etc. Many of these technologies are being used successfully in distance learning programs but to develop the effective classroom teaching the use of ICT should be well woven in our teaching training program to make prospective teachers more competent with enhanced capacity in this era of globalization. A successful teachers training program is one which develop teaching skills and capacity to face the challenges in present scenario. Use of ICT for teachers training program has been recognized by government of various South Asian Countries. In India Intel has initiated "Intel Teach across India Program". Several other programs are also running in the same direction. Training a teacher to use ICT in his teaching is more crucial than acquiring theoretical knowledge of ICT tools. ICT use is not to make content attractive but it is used to organize, share and collaborate the information and communicate in an effective manner making teaching learning more productive. Only blackboard may not be helpful in elaborating various instructions. Imparting the knowledge through ICT tools may reduce efforts and energy and make more impressive effective learning. Thus the use of ICT has changed the role of teachers from disseminator of information to learning facilitator, helping student to construct their own understanding.

#### IV. Conclusion and Suggestions

Now is the time of two main phenomenon in whole world and these are globalization and liberalization. The impact of both is very much visible in the field of education too. There are many establishments of international schools and global university in our country too. Which are completely equipped with the use of ICT in almost all aspects of education i.e. not only in classroom teaching but also in assignment, projects, records and evaluation etc. In such a scenario if our prospective teachers will not acquire the practical knowledge of using ICT tools how will they compete with global challenges? So, though late, but still it is the right time to integrate ICT use in teachers training program. Thus the conclusion of the study is that integration of ICT in teachers training is the need of the hour.

Finance is the main hindrance in India to modernize the whole education system. If support is not given by the government to government aided schools and colleges this task may not be completed and will create a big ditch between private and government institute and so will be between students of both.

The suggestions of this study are

1. MHRD and other appropriate authorities should pay a prime attention towards teachers training institute and given them financial support to be competitive in this era.
2. In teachers training institutes teaching of all papers should be compulsorily assisted by ICT tools. In practical exams also a separate exam should be conducted for ICT use in classroom and for developing teaching materials for ICT tools so that capacity of prospective teachers may increase in this direction.
3. During B.Ed. session quiz competitions, feedback of students, internal evaluation should also be done by using ICT tools.
4. Government and government aided teachers' training

institutes which are well equipped with ICT should provide the community schools the short term course facility for their in service teachers.

5. All universities should organize a compulsory ICT training orientation program for all B.Ed. teachers to make its use more effective for the enhancement of capacity of prospective teachers making them ready to face the challenges of globalization and liberalization in education.

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