

ICT IN TEACHER EDUCATION

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ICTs have the potential to enhance access, quality and effectiveness in education. Not only does it support teaching and learning within other curriculum subjects, but it is also a subject in its own right. ICT enables students to access, share, analyse and present information gained from a variety of sources. They fundamentally affect the way people learn and communicate. They can transform the nature of education where and how the learning takes place. But ICTs in education are not transformative on their own. Transformation requires teacher who can use technology to improve student learning. The professional development of pre and in service teachers in the area of ICT integration is essential. But unless teacher educators model effective use of technology in their own classes, it will not be possible to prepare a new generation of teachers who effectively use the new tools for teaching and learning.

The UNESCO (2002) document “Information and Communication Technologies in Teacher Education-a Planning Guide” states that with the emerging new technologies, the teaching profession is evolving from an emphasis on teacher centred, lecture based instruction to student centred, interactive learning environments. Designing and implementing successful ICT enabled teacher education programmes is the key to fundamental, wide ranging educational reforms. Teacher education institutions may either assume a leadership role in the transformation of education or be left behind in the swirl of rapid technological change. For education to reap the full benefits of ICT in learning, it is essential that pre-service and in-service teachers have basic ICT skills and competencies. Teacher education institutions and programmes must provide the leadership for pre-service and in-service teachers and must be model in the new pedagogies and tools for learning. They must also provide leadership in determining how the new technologies can best be used in the context of culture, needs and economic conditions within their country.

Therefore in teacher education institutions, the pre-service and the in-service teachers must be taught the basic ICT skills and competencies and they must also provide leadership quality in them so that they can use it effectively in the teaching learning process. Therefore there is a need of ICT for better communication and it also helps the teacher to use technology effectively in their own classes and this will also help to prepare a new generation teachers who can use these new tools in the teaching learning process. Information and Communication Technology (ICT) has become one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concept of ICT as the part of the core of education, alongside reading, writing and numeracy. UNESCO aims to ensure that all countries, both developed and developing have access to the best educational facilities necessary to prepare young people to play full roles in modern society and to contribute to a knowledge nation.

Recommendation of Commission and Committees on ICT.

Science our society heavily depends on ICT in many aspects of work and personal life, it will expected our schools to familiarize pupils with computers and related ICT components and teacher should use all resources to the possible extent. Hence the following committees and commissions have recommended its use in education.

National Curriculum Framework for School Education (2000) stated that, “The new technology has a tremendous potential to revolutionize education and transform school dramatically. Integration of ICT into schooling would demand the educational planners to look beyond the current urban classrooms devising updated plans for education in an electronic environment even in far flung rural area and expanding their design so that the computer becomes more than a subject of study. It is not merely integrated into an existing curriculum it becomes, instead, an integral part of the schooling progress resulting in universal

computer literacy, Computer aided learning (CAL) and finally, computer based learning throughout the country.”

National Task Force on Information Technologies (1998) has realized the vast potentials of IT in different fields including education as it stated the following lines:

“Information Technologies (IT) modernize the economy, expands and deepens the possibilities in education, accelerates growth, creates, large scale direct and indirect employment to the educated youth and boosts exports. If there is one single technology, that can be applied right across all sectors of technology, all area of administration, all levels of education and all types of services, it is Information Technology. Similarly, if there is one technology where India can emerge as a strong global player in the foreseeable future, it is IT.”

The Sixth Five Year Plan (1975-80) Document stated that : “The importance of Educational Technology has to be adequately provided for greater efficiency, effectiveness and wider reach of educational programmes.”

National Conference on Integration Technology into Teaching Learning (2002) has recommended the following priority actions need to be taken at National and State levels:

1. The Ministry of Human Resources Development, Government of India and other decision makers ensures that ICT networks, infrastructure, computer facilities and human resources training are available to all educational Institutions.
2. The concept of Educational Technology be demystified so that Educational Technology is fully understood in its real perspectives, from the narrowed concepts of hardware technology to a comprehensive concept of development, application and evaluation of systems, techniques and aids to improve the process of human learning.

ICT Awareness of Teachers

The explosion of digital technology has created a revolution in educational instructions. The flexibility, high speed and huge storage capacity of ICT is causing teachers to redefine and rethink the traditional process of teaching. The challenge facing teachers are to evaluate relevant applications of information and communication technologies in the teaching learning process. At the same time, instruction utilizing information and communication technologies must reflect what is known about effectiveness of student-centered teaching and learning process.

The digitization of technologies has made a great impact on teachers' role. The impact can be felt in many ways. Digital technologies are changing the ways teachers interact with students in the classroom. As the importance of language to learning, the ways organizing and relating information facilitates understanding and the influence of social factors in the classroom are all impacted by digital technologies. Now the instructional approaches are also influenced greatly, as they are incorporated by a variety of technologies. Now teachers and students alike are interacting in new ways afforded by digital technologies. Teachers and students have virtual discussion related to course content, advice and counselling in a wide variety of times and paces through e-mail and other features of the web. Teachers and students now produce documents with more information and in far more diverse formats as a result of desktop publishing, online libraries and databases and file transfer capabilities. The pervasiveness of digital technologies motivates a thorough review of technological impact of instruction in education.

ICT AND TEACHER

In this age of rapid change and uncertainty, there is one thing of which is certain that teachers need to adapt to the change for their survival. They have to keep pace with new methods and technologies. New knowledge based on the latest research can in a few seconds be distributed globally with the help of ICT. Knowledge is constantly changing and becoming obsolete so rapidly that the distributors of knowledge i.e. the teachers can hardly update themselves with this pace of change. Knowledge is not static but dynamic. It increases at very high speed in which the amount of knowledge is increasing globally makes the teachers worry about their role today and tomorrow. The role of the teacher must change in the sense that it is no longer sufficient for teachers merely to impart content knowledge. It will however, be crucial for teachers to encourage critical thinking skills, promote information literacy, and nurture collaborative working practices to prepare children for a careers several times. One of the most ubiquitous forms of ICT- the Internet gives access to an exponentially growing storehouse of information sources, almost unlimited networks of people and computers, and unprecedented learning and research opportunities. Sometimes ICT illiterate teacher feels pity while comparing them with his ICT literate students. Therefore it is necessary to revise the traditional

understanding of the role of the teacher in this information society. Today, the role of teacher has changed from giving or passing of information to the organizer and distributor of the teaching with the integration of ICT in the educational programmes and in teaching learning process. With the integration of ICT in educational process, they can elevate themselves from the arm-chair tutor to knowledge worker. The awareness, use and the need of teachers is felt for the ICT in education which can help them to empower them for the future classes and students.

Conclusion

Present school education courses should take advantage of the capabilities of technology and extend instruction beyond or significantly enhance what can be done without technology. Teachers should experience technology as a means of helping students explore topics in more depth and in interactive ways. As a large number of teachers are not computer and ICT literate, they have to face a tuff time in near future due to gradual shifting interest of students towards ICT. The time may be imagined to see the miserable conditions of an ICT illiterate teacher teaching ICT literate students. In this context, now it is the high time for every ICT illiterate teachers at least to create awareness about ICT, ICT literate teacher to be the ICT masters and the ICT masters to see it as sky is the limit.

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