

The Significance of Information and Communication Technology in the Present era : Its Implication in Teacher Education

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ABSTRACT

In the current age we live in , ICT has become an important Component. Everyday there is some new gadget or software that makes lives easier and improve with the help of technology and software that already exists. Making lives easier is the significant role of the technology. Like wise , technology is playing an increasing role in education too. As technology advances , it is used to benefit students and teacher of all ages in the learning process. Technology has also advanced to help learners in educational video , games and system for younger generation in curricular transaction. The area of teacher education is an important one for us to tackle the Scholastic and non- scholastic activities with the help of modern technology. There is a need to create virtual teacher education centre at DIETS , college of teacher education , University deptt. Of Education and institute of Advanced studies in Education.

Keywords: *Education, Telematics, Quality, Learning, Skills, Knowledge*

Modern Scientific inventions and discoveries have given immense comfort to human beings. Man has conquered time and space. News flies in year with a twinkling of eye from one corner of globe to another's and even from one planet to another Man has already landed on moon and is trying to trace life in other planets. Man has exploited nature up to the maximum level for his own interest and comfort. "As a tools for the education of children and youths, the new technologies offers an unprecedented opportunity to satisfy increasingly widespread and diversified demand, while maintaining quality. The possibilities they upon up along with their advantage for teaching, are vast. Computers and multimedia systems for instance make it possible to desiqu individual learning paths along which each pupil can move at his or her own pace; they also make

it easier for teachers to organise acquisition in mixed ability class".

UNESCO, 1996

Information and communication technologies (ICTS) are technologies that facilitate communication, processing and transmission of information by electronic means. This compasses the full range of ICTS, from radio and television to telephones computers and the internet. The ability to use ICT effectively & appropriately is essential to allow learners to acquire and exploit information within every sphere of human activity. The use of computer and computer technology in education creates new and increased possibilities in individualized, problem oriented and research oriented ways of working. The teacher being a facilitator and guide, facilitating research and

training, with the students doing the work, replaces the sort of education where the teacher is the instructor and giver of information. Thus, information technology demands a change in the teacher's role.

By integrating computers in education, the teachers allows pupils to discover new ways of using technology. ICT can provide an appropriate and effective learning medium in every curriculum area and acts as a catalyst in integrating different subjects and curriculum areas. In order to achieve this potential, certain consideration need to be kept in mind when planning the use of ICT in classroom. In planning the integration of ICT with learning, it is important the teachers evaluate the role, if any, that ICT has to play in any given learning situation computer-based activities, on their own, can provide very effective learning experiences for children. ICT can become a powerful support tool in the teaching and learning process. A few examples of how ICT can be integrated with learning at the different levels is a subject of consideration.

Education system around the world are under increasing pressure to use the new information and communication technologies to teach students the knowledge and skills they need in 21st. Century. Teacher education institutions are faced with the challenge of preparing new generation of teachers to effectively use the new learning tools in their teaching practices. For many teacher education programmes, this daunting tasks requires the acquisition of new resources, expertise and careful planning. ICT's provide an array of powerful tools that may help in transforming the present isolated, teacher - centred and text-bound classrooms into rich student-focused, interactive knowledge environments. To

meet the challenges schools most embrace the new technologies and appropriate the new ICT tools for learning. They must also move towards the goal of transforming the traditional paradigm learning. To accomplish this goal require both a change in the traditional view of the learning processes and an understanding of how the new digital technologies can create new learning environments in which students are engaged learners, able to take greater responsibilities for their own learning and constructing their own knowledge. Thomas Kuhn suggest that revolutions in science come about when the old theories and methods will not solve new problems. He calls these changes in theory and methods a "Paradigm Shift". There is widespread concern that the educational experiences provided in many schools will not prepare students will for the future. Many educators and business and government leaders believe that creating a paradigm shift in views of the learning process, coupled with applications of the new information technologies, may play an important role in bringing educational systems into alignment with the knowledge based information-rich society. As technology has created change in all aspects of society, it is also changing our expectations of what students must learn in order to function in the new world economy. Students will have to learn to navigate through large amounts of information, to analyse and make decisions, and to master new knowledge domains in an increasingly technology society. They will need to be life - long learners, collaborating with others in accomplishing complex tasks and effectively different systems for representing and communicating knowledge to others. A shift from teacher-centred instruction to learner centred instruction is needed to enable students to acquire the new 21st. century knowledge and skills.

Every era is remembered in history for its unique contribution like the Egyptians for their sculpture, Rome for its monuments. This era in future will be known as the electronic era and more so the era of information Technology. There was a time when computer science and information technology were considered to be elite technical subjects which require a strong foundation in mathematics. It is no longer true now. ICT has become an essential component of Teacher Education in Present day's context. ICT is the supreme gift of science to teacher education, ICT as other sciences deals with realities which serve as raw materials for structuring of experiences. Realities of life are as essential as thoughts to form one's own philosophy, science is closely related to philosophy of education so also ICT to philosophy. It is possible to meet varied ideologies /philosophies using ICT in teacher Education.

The ICT attempts to achieve a harmonious synthesis of various philosophies and ideologies of the modern world leaving aside conflicts and controversies. ICT supports teacher education in achieving its objectives of fostering creative thinking among students teachers and teacher educators for the reconstruction of knowledge, developing communication skills and also to foster a desire for lifelong learning.

Knowledge, information and skills for increasingly being regarded as the major weapons in the crusade for supremacy on the economics front. Knowledge industries are taking off at breakneck speed. Information highways are opening new prospects. Television, telephone and computers are reshaping practically every work of life, including education. The classrooms of tomorrow could be entirely different from those of today. The importance of the role of the teacher

as an agent of change promoting understanding and tolerance has never been more obvious. It is likely to become more critical in this century. The need for change from narrow nationalism to universalism, from ethnic and cultural prejudice to tolerance, understanding and pluralism and from autocracy to democracy in its various manifestations on teacher who participate in the moulding of characters and minds of new generation.

Good quality training entails bringing training teachers in contact with experienced teachers as well as with practioners and researchers in this particular disciplines. Regular opportunities need to be offered for practicing teachers to learn through group works session and through INSSET programme. Teacher education should include a strong component of training in research methodologies. Linkages between teacher training institutions, schools, and universities. This scenario becomes more clear if we consider the tensions identified by Delors commission. The first expectedly, is the economic crisis. The other two are the crises of ideology of progress and some rest of a moral crisis. The other understandable in the age of globalization and liberalization a very small segment may be able to enter the top bracket of economic prosperity.

The technological breaks through have influenced today's work culture in a big way. The internet and multimedia are the new tools to access the information. The structure of theory and laboratory syllabi needs to be made dynamic, skill full and flexible to equip the students with the power to accept challenges in future with confidence of course the suitable component of teacher education occupies the due place for professional advancement and the Psycho-socio cultural aspects can be achieved . The importance of understanding

human behaviour, knowing various devices and strategies aiding students motivation, transfer of training, the thinking process and method of problem solving be given proper recognition in the teacher education process.

Conclusion:

The Buzz word of 21st. century is “Telematics” (Computers connected to networks). It denotes the emergence of new technologies of communication and most significantly, the telemetric revolution, which has brought revolutionary transformation and drifted the whole life style of the people. We already have some positive experiences of involving ICT into Teacher Education. An important step is now further development of these experiences through training, the pre-service & in-service teachers, should receive inputs in ICT - related topics in view of their professional, pedagogic and didactic considerations. The area of Teacher Education is an important one for us to tackle, since it is the DIETS, colleges of Education, Institute of Advanced studies in Education and University Department of Education which produce Teacher Education who will have to carry out the integration of ICT in Teacher Education. In spite of present ICT intervention in teacher education to meet the needs of future generation especially in universities. There is a need to further create a virtual teacher education centre. It is the bound duty of every

teacher educator personally and universities collectively to create an ideal virtual teacher education centre to provide access to all the institutions and to seek guidance on all fronts. It may provide right from simplest instruction to that of complex guidelines. It may help to reduce heavy load on apex bodies. Further provide all sorts of guidance and direction with respect to ideal practices. By creating a tutor, guide and all necessary instructions related database to the upcoming institutions.

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