ICT AND TEACHER EDUCATION

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ABSTRACT

Technology is evolving at an exponential rate. Teaching demands and the changed face of education add pressures to an existing teaching populace. Loss of expertise and an undersupply of ICT skilled teachers, heralds an age of extreme concern. We have to realize that ICT is here to stay, and its infusion into every aspect of daily life cannot be argued or disbanded. So, for today’s society to function effectively, ‘highly competent teachers must present tomorrow’s school graduates with the highest quality of schooling. Through professional development or retraining the teacher models life-long learning and acquires good ICT skills incorporated into a new pedagogical approach. The skills and knowledge of the older teacher then evolves into a rich tapestry of knowledge that can only serve to create fuller teaching styles that will ultimately benefit the student and society.

All teachers must then embark on this continuum of professional development with encouragement and support, and ultimately be valued.

KEYWORDS: ICT teachers, pre service, professional development, pedagogical approach.

INTRODUCTION

ICTs are one of the major contemporary factors shaping the global economy and producing rapid changes in society. They have fundamentally changed the way people learn, communicate and do business. They can transform the nature of education—where and how learning takes place and the roles of students and teachers in the learning process. Basically ICT is a combination of Informatics technology with other related technologies specifically communication technology. ICT relates to all those technologies that are used for accessing, gathering, manipulating and presenting or communicating information.
KNOWLEDGE REVOLUTION AND ROLE OF THE TEACHER

Dr. A.P.J. Abdul Kalam once said, “If a country is to be corruption free and become a nation of beautiful minds, I strongly feel there are three key societal members who can make a difference. They are the Father, the Mother and the Teacher.”

The pace of technological revolution and emergence of a knowledge society has changed the traditional role of the teacher and the students. Traditionally, the teacher used to be the source of knowledge for the students. But, in many cases, the teachers do not possess adequate knowledge to supplement the view of the student, and the main source of knowledge remains limited to text book. At present, in a number of cases the student is more informed than the teacher. Furthermore, when these teachers find themselves in a situation where they are no longer the principal source for delivery of information they get confused about their new role in relation to the use of these technologies.

In the new phase there is decentralization of knowledge source Thus, there is a need to facilitate training on ICTs for teacher both at the preservice level and in service level.

INCORPORATION OF ICT IN EDUCATION

ICT incorporation is important in teacher training as only teachers have the knowledge, experience and appropriate context for developing digital learning methods. They are with students all the time; they see how they react to teaching and what they produce as a result. Teachers are best placed to know what students need if they are to master the concepts and cognitive skills of formal learning. The act of teaching provides the fieldwork that needs to be carried out to test, redesign and retest the new methods being developed.

Though, Organizations have started training teachers by using ICT, there is a major drawback, i.e. organizations focus on using ICT as Teacher training for course content, rather than, improving pedagogy, which is more important. UNESCO has published a summary of case studies conducted in 9 countries in different parts of world and most of these studies reflect the necessity of having multiprong strategies for teacher education and to improve their expertise.

Therefore, a Teacher must master the use of information skills of research, critical analysis, linking diverse types and sources of information, reformulating retrieved data, if they are to teach their pupils to develop these same skills. Thus, it can be said that we have to move form “LEARNING TO USE TO USING TO LEARN”.

There is little doubt that today’s prospective teachers will be expected to teach with technology in the classrooms of tomorrow. However, the resources available to teachers in terms of hardware, software, networking and professional development vary greatly at different levels. Thus, the development of a pedagogically based framework of constructs that are related to learning to use computers and an approach to learning to use computer and an approach for its application in teacher preparation shows promise for meeting the following challenges.
(1) It is a challenge in itself to find classrooms where preservice teachers could observe teacher educators using technology appropriately and to understand where and how to include technology in their lessons. Teacher education and technological competence should involve all aspects of the preparation of teacher, i.e. introductory competencies, use of technology in methods classes, school placements and student teaching. Therefore, teacher preparation programs could no longer rely on an introductory course.

(2) Another challenge of preparing teachers to teach with technology is that as a result of knowledge generation, our knowledge about computer technology is constantly changing.

(3) To meet finances is another challenge. In a country like India where a major section of population of society is deprived of education and basic necessities of life, hi-tech teaching and training is difficult to achieve.

(4) Lack of human skills is another problem. Before preservice teacher training we should stress on inservice teacher training for appropriately using ICT tools. Then only we will have enough workforce to facilitate preservice training.

(5) There is no standardized syllabus for any class through the country. This makes it difficult for software developing companies to deliver the level of education or lesson plans necessary to ensure the concept clarity.

(6) Technological development always warrants transition to newer technologies by jeopardizing the cost effectiveness of the distance education programme. So, it becomes important to retain the already existing technologies for a considerable period of time and subsequently embrace new technologies.

(7) The increase in expenditure on elementary education alone over the last four Five year plan periods has been more than the increase in expenditure on education as a whole. This limits the chances of improving the quality of education.

The effectiveness of ICT integration can be adjudged by a study conducted by Monica Nagpal. He evaluated the effectiveness problems and suggestions for improving mobile phones, SMS amongst student teachers and teacher educators of B.ED program. Results showed that M-learning has already taken its place in teacher preparation and it must be expanded further by using appropriate language and incorporating the preferred frequency.

Other studies show that mobile phones can record the lectures, read E-books, provide feedback, access internet, multimedia materials, practical exercises and use educational software to enhance learning process.

**ICT AND FUTURE TEACHERS**

In the foreseeable future teachers and learners will not be anchored to classrooms as they make appropriate use of various forms of computer enhanced learning. The traditional positioning of teacher at the front of a classroom with students at tables around, but basically facing the teacher, will be only one of many learning situations to be used each day.
Prof. Ram Takwle (2003) said about IT driven education, “They are changing the methods of content generation, content storage, content packaging and content delivery and hence offer a new paradigm of education.”

ICT especially in 21st century envisages excitement to the learner’s eyes, ears and more importantly the head. ICT helps in transforming the definition of literacy, learning and knowledge; a definition that increasingly includes multimedia digitized literacy. ICT facilitates the learner to have control on lesson, pace the sequence, content, and feedback, which in turn enhances the efficiency of learning. Moreover, ICT-empowered simulated situation minimizes dangers in the real world’s e.g.- practical’s in science, pilot training driving etc.

Finally, teachers in the future will make even more use of ICT for professional activities including lesson planning and preparation of teaching materials, recording student assessment and other administrative tasks and their own professional development and continuing education. Teacher already produce design briefs and worksheets using word processing, but this will change to encompass web based material as the electronic screen slowly replaces printing on paper-schools are beginning to make use of wireless technology for computers, especially wireless local area networks(WLAN). Concepts such as 4MAT (About learning 2001) will be used to help teachers devise learning experiences that don’t just allow for different learning styles, but instead actively encourage students to learn to learn in a variety of modes and groupings.

To assist future teachers it is necessary that education systems, the employers indicate to teacher education providers which models they would expect teachers to follow. Otherwise it is impossible to properly prepare new teachers and to offer professional development to existing teachers, when there is no systemic agreement on which ideas will be used at what levels.

CONCLUSION

The objective at preservice level is not to prepare technocrat, but to develop techno pedagogues. Teacher should be in a position to integrate technology into teaching / learning, as well as develop the art and skill of webogogy (i.e., to make use of internet technology, exploring it, accessing information form it to use in teaching learning etc.) Besides, offering ICT as a compulsory and special course, integrated approaches need to be studied along with methods courses. It is very important to remember that ICTs in education are not transformation on their own. Transformation requires to improve student learning. The professional development of teacher educators in the area of ICT integration is essential. 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.

REFERENCES


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