

## ICT and Teacher Education.....Miles To Go.....



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"The illiterate of the 21<sup>st</sup> century," according to futurist Alvin Toffler, "will not be those who cannot read and write, but those who cannot learn, unlearn, and re-learn."

Information and Communication Technology is becoming a common word to everybody, whether we are directly or indirectly related we do talk of ICT and its application and how it has transformed in day to day lives. Although a long time back in this country, ICT was not recognized as a real utility for the teacher education. But since NCF 2000, when IT was formally recognized as a discipline, since then many of the teacher training institutions including govt. and private embarked upon the campaign for making IT as a compulsory tool of teaching-learning or students and teachers. Not only this the IT training and its utility in the classroom teaching learning has also been proved beyond doubts. IT helps in the better teaching-learning process. The studies in relation to it are also available. We know all these components from theory to practice can be done, if IT environment is properly conducted. So, when I am referring to "MILES TO GO"....I mean that IT may have settled down in our classroom system but may have to travel yet a long path before we can reap upon its fruits.

So, the futuristic classrooms will have teachers who are ICT (acronym of Rattan, Rajeev, 2005) which speak that the teachers who Innovates (I) the learning and teaching process in the different ways for different needs of students; the teachers who could communicate (C) more and facilitate learning in a paradigm shift where in the shift is from teaching to learning and probably these two situations can be best enacted, in a technology by the teachers (T) based in the classrooms & for it the teachers needs to be skilled.

ICT's include radio and television, as well as newer digital technologies such as computers, mobile and hand held devices and the Internet whether through the search engines or the Social networking sites have been called as potentially powerful and most enabling tool for educational change and reform in and out of the classrooms. When used appropriately, different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital

workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life.

### Paradigm Shift

In order that this transformation is to take place, the teacher education which is a fundamental to any classroom situation is under a paradigm shift where by the emphasis is now more on learning then on teaching. A classroom of 20-30 students was there for standardized instruction for everyone and it was based on the teacher centered approach. It is like a broadcast model with one mouth opening for hundred of listeners. The teacher in this case is the repository and transmitter of knowledge but only the facilitator of the knowledge. The traditional educational paradigm is often characterized by the following views of learning:

- Learning is hard
- Learning is based on the deficiencies of the students
- Learning is based on transmission and its reception
- Learning is an individual and solitary process
- Learning is always linear
- Learning is based on breakup of content into small units

An old adage state, "Tell me and I forget, show me and I remember, involve me and I understand". The last part of this statement is to be understood in the changed role of the classroom contexts for teaching. Now, the emphasis is not only to narrate the textual based facts and figures but how these facts and figures can really be useful and are applied in the day-to-day context of students' life is more useful and emphasized. It clearly shows that now the child has not to learn from the traditional sources of the classroom like that of teacher and textbooks but may be from all such sources like newspapers, television, magazines, the internet etc. So, learning is not isolated but should be collaborative (Strommen and Linclon, 1992). Learning is from resources in the form of peers (Dewey, 1910).

The thinking on the classroom is to undergo a change, being a place of the convergent thinking to creative thinking, which is primarily a divergent thinking, the capacity to arrive at unique and original solutions and the tendency to consider problems in terms

of multiple solutions rather than just one (Copangelo, 1991). In India many researchers (Kumar, 1991; Panda, 1997; Sharma, 1992; Srivastava, 1997) observed that teaching-learning in the Indian classrooms is still based on the following premises-

- The teacher teaches and students are taught.
- The teacher knows everything and student knows nothing.
- The teacher thinks and students are thought about.

In Indian classrooms, another very glaring problem that is encountered is availability of good textbooks and other resource materials. The books available are "by and large run-of-the-mill products with age old facts (Pande, 1997). But these need to be replaced, as there is a shift in the paradigm from teaching to learning particularly in subjects like of math and science, as the methodology of teaching these subjects is faulty. Gupta (1996) carried out as a part of a large-scale study under DPEP (District Primary Education programme) and found that the 'knowledge' level of his sample of primary school teachers on a test of reading and mathematics was much lower than expected.

#### **Will Ict's Replace The Teacher?**

The answer is a resounding NO! In fact, with the introduction of ICTs in the classroom, the teacher's role in the learning process becomes even more critical. What can and should change is the kind of role that the teacher plays. The role of students, in turn, also expands. And since ICTs can open up the classroom to the outside world, the community can also play a new role in the classroom. As learning shifts from the "teacher-centered model" to a "learner-centered model", the teacher becomes less the sole voice of authority and more the facilitator, mentor and coach-from "sage on stage" to "guide on the side".

The teacher's primary task becomes to teach the students how to ask questions and pose problems, formulate hypotheses, locate information and then critically assess the information found in relation to the problems posed. And since ICT-enhanced learning is a new experience even for the teachers, the teachers become co-learners and discover new things along with their students. Teachers and students from differ-

ent schools, subject-matter experts, parents, community and business leaders, politicians, and other interested parties also become involved in the learning process-as resource persons, critics, mentors, and cheer leaders. They also comprise a public, and hopefully critical, audience for students' work published on the Web or through other media. At the in-service level, ICT teacher professional development (TPD) should be long-term, teacher-directed, and as flexible as possible. Institutionalized incentives and support for teachers to pursue ICT. This may take the form of promotions for teachers who innovate with ICTs in the classroom, or simply making sure that teachers have adequate access to technology after training. (Perraton, H. and C. Creed 2002)

#### **Will Ict Use Be The Silver Bullet That Will Rid A Developing Country Of All Its Educational Problems?**

It is not the technology but how you use it! Put another way: "How you use technology is more important than if you use it at all...[and] unless our thinking about schooling changes along with the continuing expansion of [ICTs] in the classroom then our technology investment will fail to live up to its potential." (Thornburg, D) Technology then should not drive education; rather, educational goals and needs, and careful economics, must drive technology use.

#### **The Role of Teacher In Integrating Ict**

That is the important reason that teachers needs to be trained in the skills of ICT as they are supposed not only to exploit the information and the information sources for their students' learning but also of their own 'learning' even as teachers. Dr. Craig Barrett (2004) Intel President & CEO observed, "All educational technology in classroom today is worth nothing, if the teachers do not know how to use it effectively, computers are not magic, teachers are.

To sum up we can say that in order to make good impact of ICT on education, it would be necessary to take a holistic view of systematic needs of training. The teacher has to be freed from many inadequacies- both in administrative as well as financial setup so that he or she can freely try innovations and bring in changes as a follow-up of the training prog. Enrichment and nourishment of every sub-system must be taken up simultaneously by timely interventions even by relaxing the relevant rules, if need be.

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