



# Using ICT to Create Effective Teaching Learning Process in Teacher Education

DR. YOGESH R. PARMAR

I/C, Principal

Smt. S.I. Patel Ipcowala College of Education, Petlad

## 1. Introduction

Unplanned expansion of teacher's training programme also contributes to quality degradation in teacher's preparation, the main cause being non-availability of quality teacher educators. Under such circumstances, Information and communication technology (ICT) can play an important role in the preparation of quality teachers. Looking to the potentiality of ICT, the National Council for Teacher education (NCTE) lays lots of emphasis on its use. The National Assessment and Accreditation Council (NAAC) also treat ICT as one of the criteria for grading of the teacher training institution.

## 2. Meaning of ICT

ICT is defined as, "Scientific, technological and engineering discipline and management techniques used in information handling and processing their applicants, computers and their interactions, with men and machines and associated social economic and cultural matters." (UNESCO 1998). It entails, "the use of hardware and software for efficient management of information, that is, storage, retrieval, processing, communication, diffusion and shoring of information for social economic and cultured upliftment." (Sansanwa; 2000). Information technology is used to cover technologies used in the collection, processing and transmission of information. It includes micro-electronics and info-electronics based technological incorporated in many products and

production process and increasingly affecting the service sector. It covers inter-alia computers, electronics office equipment, these communication, industrial robots and computer controlled machines, electronic components and software products.

## 3. Information Technology and Teacher Education

Information Technology provides facilities for chart, e-mail, video mail etc. on internet. It can be used in teacher education for

- Updating Information
- Developing teaching competencies.
- Becoming acquainted with the latest techniques / methods of teaching.
- Sharing instructional materials.
- Developing research competencies.
- Enriching teacher education garreeter.
- Research and Development in teacher education.

## 4. ICT in teacher education

The UNESCO (2002) document "ICT in teacher education. A planning guide" states the importance of ICT in teacher education as follows:

"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 instructions may either assume a leadership role in the transformation of education or be left behind in the swirl of repaid 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 a 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.”

The above passage conveys the vital need for incorporating ICT in teacher education both pre-service and in-service, the document further suggest that there should “ articulation and dissemination of a vision of how ICTS fit into the broader society and education. Together policy makers and educators can build strong national policies that clarify outlines how ICTS advance national goals and promote. Innovative use of ICTS to improve teaching and learning.” Teachers should know:

- When not and how to use ICT in their subject
- How ICT can be used for teaching the whole class
- How ICT can be used when planning, including the use of ICT for lesson preparation and the choice and organization of ICT resources.
- How to assess pupils work when ICT has been used.
- How ICT can be used to keep up-to-date, share best practices and reduce bureaucracy.

The NCF (2005) perceives the use of ICT as serving “To build a positive ethos for curricular reforms if they are used as sites of discussion and debates in which teachers, training personnel and community members can participate. The NCTE had made ICT literacy a compulsory component of the secondary pre-service teacher

education programme workshop have been organized by IGNOU on the effective use of ICT for directors and faculty of DIETS and SCERTS NCERT has made use of teleconferencing for continuing professional development of teachers. ICT is being used to provide training to pre-service as well as in-service teachers.

### 5. Opportunities Provided by ICT:

ICT could be a powerful tool in providing learning environments where teachers and learners are partners, and where learners have scope and prospect for choice in the nature and form of their learning. ICT supported learning environments offer many opportunities for learners including:

- Provision of improved access to education.
- Flexible modes of content presentation and delivery.
- Presentation of content and information in authentic contexts.
- Provision of a myriad of information sources offering many wide and diverse perspectives on content and information.
- Interactive and engaging learning settings.
- Communicative elements to support the independent learner.
- Collaboration, communication and Co-operation between learners for active and engaging learning environments.
- Support for customized educational programmes to meet the needs of individual learners.
- Place, time and independence for learning, And Provision of tools that can enhance student’s cognitive powers and processes.

The value of using ICT in farming and sustaining learning activities and its capacity to sustain the farms of communication needed to maintain the partnership.

### 6. Suggestions

In the light of fare going review of existing literature on use of ICT in class room. And of the curriculums in centuries where ICT has been a part of the teacher education curriculum for a

few years, teacher education institutions can undertake the following to equip their students to use ICT both in the class room and for continuing self-development.

- Expose students ICT resources and give them all a basic orientation and experience in handling them.
- Train students in the use of computers for making presentations, reports and so on.
- Provide students with model lessons incorporating ICT resources.
- Provide students with an orientation and opportunity for preparing and delivering ICT integrated lessons.
- Encourage and support students in the use of ICT resources and ensure continual access to all students.
- Develop a library of educational and a list of websites with resources appropriate for the discipline they will be teaching.
- Keep updating by constantly, researching innovations in the field and new strategies to use ICT.
- Give students an opportunity to use these themselves.
- Give students assignments that require them to use ICT resources and have them submit on line.
- Develop appropriate evaluation strategies both for competency in and use of ICT resources.
- Provide the student teaches experience in creating own web pages.

This is by no means a comprehensive list some of the above measures are already in place in teacher training institutions, as per NCTE regulations. The list will continue to grow as ICT resources grow.

## 7. Barriers

Some barriers need to be dealt with while implementing teaching learning partnerships through ICT. Some examples are as given below:

- Difficulty in accessing servers that appears to be down or overloaded.
- Problems with pages requiring unexpected plugs – in and helpers.
- Long download times caused by bottlenecks in external systems.
- Frequent instability of software and systems.
- Lack of familiarity and experience with the WWW and appropriate search engines not only on the part of learners but also the teachers.
- More burdens and responsibilities are placed on the learners as the learning activities require higher levels of cognitive engagement and processing them others.
- Not all learners are willing participants in changed learning environments, so sometimes; lot of convincing is required by the teacher.
- Some learners hold that the best teaching takes place in a face-to-face mode through direct instruction student centered learning can be uncomfortable for these students because they feel that it generates distance between themselves, and the teacher and many teachers are reluctant to take up the challenge to use the new online media.

## 8. Conclusion

The focus is placed on the student to explore and inquire to reflect and articulate, to collaborate, and co-operate in active tasks requiring enhanced degrees of initiative, interest motivation and cognitive and physical efforts. Teaching learning partnership through ICT holds strong and exciting prospects for ensuring that the needs and interests both of students and teachers are met. So educators need to take lead in the design, development and effective use of ICT to convey specific content to any learner to matter the location or goal of study.