Inclusion of E-learning in Teacher Education

DR. KINNARY BHARATBHAI PATEL

NABILA SAIYED ARIF ATTAS
Principal,
B.J.Patel College of Education, Bardoli

Abstract:
Education today is more than teaching & learning with an emphasis on technology. With the emergence of World Wide Web (WWW) in 1969, the world of teaching & learning has adopted it as one of its main innovations. However, in spite of extensive use of the web in education, varieties of terminologies are used to depict this new field of knowledge. Some of the terms mostly used interchangeably are as follows : Web-based Instruction, Virtual Learning, Online Learning & E-learning. E-learning has a capacity & has brought tremendous possibilities in the field of education. E-learning is that form of learning which uses a network for delivery, interaction or facilitation. It is a technology-based learning programme conducted online wherein students can communicate with peers & instructors. Teachers at one place can teach multiple students at different locations & the students can receive constant feedback. It focuses on the self-learning through electronic devices. For education to reap the full benefits of E-learning, it is essential that pre-service & in-service teachers have basic skills & competencies. In this paper, the presenter has discussed regarding need of E-learning in Teacher Education, Advantages of E-learning and Hurdles in the path of technical integration of E-learning in teaching- learning process. The presenter also suggested some strategies for inclusion of E-learning in Teacher Education.

1. Introduction

E-learning is that form of learning which uses a network for delivery, interaction or facilitation. It is a technology-based learning programme conducted online wherein students can communicate with peers & instructors. Teachers at one place can teach multiple students at different locations & the students can receive constant feedback. It focuses on the self-learning through electronic devices. It is an advanced concept which will provide students the appropriate support & atmosphere for self-learning & achieving maximum knowledge. Students can form chat-groups & connect themselves for discussing. By doing this, the traditional method of providing knowledge, information which has many limitations will be eliminated & the teacher trainee will be able to get latest & complete information, knowledge according to the will & capacity of teacher trainees. Teacher education institutions are faced with the challenge of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices.

The paper covers up the following points :
► Need of E-learning in Teacher Education
► Advantages of E-learning
    ► Hurdles in the path of technical integration in teaching-
      learning process
    ► Some strategies for inclusion of E-learning in teacher education

2. Need of E-learning in Teacher Education

In the age of technology when we are talking about mobile learning, web based learning, virtual learning; the teacher education institutions can not afford to take back seat. There has to be change in terms of curriculum and pedagogy at pre-service level. Looking to the technological competency to be developed on the part of the teachers the input of ICT in education at pre-service level was introduced.

Teacher education institutions may either assume a leadership role in the transformation of teacher education or be left behind in the whirlpool of rapid technological change. Teacher education institutions and programmes must provide the leadership for pre-service & in-service teachers & model the new pedagogies & tools for learning. They must also provide leadership in determining how the new technologies can best be used in the context of culture, needs & economic conditions within our country. The face of the classrooms is changing. The teacher education institution should prepare in-service teachers to keep up with the technology utility in the classroom. Full integration of E-learning in education is still far from desired particularly so in teacher education. Highly interactive multimedia or hypermedia is not yet widely used. On-line activities used are limited but should be given special emphasis on the use and integration of online resources. For education to reap the full benefits of E-learning, it is essential that pre-service & in-service teachers have basic skills & competencies. In this paper, the presenter has suggested some strategies for inclusion of E-learning in teacher education.

The aim of teacher education is to develop skills and appropriate knowledge among teacher trainees for using and integrating right technology in an appropriate manner. That is teacher should know about technology, pedagogy and content for using them effectively in day to day classroom teaching. It is clear that merely introducing technology to the educational process is not enough to ensure technology integration since technology alone does not lead to change. Rather, it is the way in which teachers integrate technology that has the potential to bring change in the education process. For teachers to become fluent with educational technology means going beyond mere competence with the latest tools, to developing an understanding of the complex web of relationships among users, technologies, practices, and tools. Teacher knowledge about technology is important, but not as a separate and unrelated from contexts of teaching i.e., it is not only about what technology can do, but also, and perhaps more importantly, what technology can do for them as teachers.

3. Advantages of E-learning
E-learning has become popular amongst educationists because of its inherent strengths and advantages it provides to the instructional process. Some of these are :
- Access to educational resources from outside the institution on a global and instant basis
- Quick and easy way to create, update and revise course materials through low-cost off-the-shelf software
- Increased and flexible interaction with student through e-mail and discussion forums
- Location and time independent delivery of course materials such as course notes, diagrams, reading list etc.
- Ability to combine text, graphics and a limited amount of multimedia, enabling instructional designers to prepare quality learning materials.
- Interactive and dynamic learning experience through online assessment tools, simulations and animated learning objects.
- Platform independent delivery, accessible through any computer with a simple browser interface.
- Increased learner control through hypertext based presentation of information.
- Opportunities for international, cross-cultural and collaborative learning and
- Ability to serve a large number of students at a potentially reduced cost.

4. Hurdles in the path of technical integration in teaching-learning process
Up till now we discussed how technology proves helpful in the teaching learning process to cater the individual differences in the class. We are also in brief known from researches that students too like to learn through technological package. Though technology has a number of benefits, it is not being used to the extent and way it could be used. Many hurdles come in the way of applying technology in the teaching learning process in the classroom.
1. Today some schools are equipped with latest hardware and software but benefit to student will depend on the skill with which (some) teachers are able to use these new tools.

2. In order to make effective use of educational technology, teachers will have to master a variety of powerful tools, redesign their lesson plans around technology enhanced resources, solve the logistic problem of how to teach a class full of students with a smaller number of computers and take on a complex new role in the technologically transformed classroom.

3. Teachers currently receive little technical, pedagogic or administrative support for these fundamental changes and few colleges of education adequately prepare their graduates to use information technologies in their teaching. As a result, most teachers are left largely on their own as they struggle to integrate technology into their curricula.

4. Moreover when teachers do make use information technologies, they are often used for either teaching students about computers or for drill and practice sessions focusing on the acquisition of isolated basic skills. Most teachers report that computers initially make their job more difficult.

5. Teachers often have a negative reaction to the narrowly technical orientation of most technology-related courses, which show them how to operate a computer, but not how to use computer to enhance their teaching.

6. Most teachers, however, cannot use computers effectively someone is available to help not only with the technical problems that are likely to arise from time to time but also with the deeper pedagogic challenges of choosing software, organizing project that make use of technology, and learning how to guide students in the use of computer-based resources.

7. Even till today the acceptability on the part of teachers is also not that positive. The resistance to change is one of the major factors which hurdles the technology integrated teaching learning processes.

8. The courses at teacher training institutes which include information and communication technology are not fully justified. The syllabus is out-dated, and the teachers who teach this subject don't justify it. Resultant the student teachers who undergo such training are not efficient enough to in- corporate technology in their day to day teaching in class.

9. Teachers have to make a move to new education, but lack time

10. Teachers fear that E-learning will dislocate them.

11. Teachers are unsure of the security provisions for their study materials and

12. Perceived unreliability of networked services and local computing services.

13. Infrastructure is one of the major problems.

14. Many teachers' and teacher educators are not tech-savvy. This is a major hindrance.

5. Strategies for Inclusion of E-learning in Teacher Education

There is need for re-examination of the existing curriculum of Teacher Education for the purpose of reshaping and making it user friendly. The UGC has decided to enhance the quality of higher education through a supplementary path by integrating E-learning in the classroom. To boost the systematic development of E-learning in Teacher Education, we recommend he following steps

- **Networking of Teacher Education centers**

  Our teacher educators are isolated. It is possible for us to network them with one another & create one of the world's largest teacher education system, so that instead of working in isolation, institutions will work in groups & will be linked with each other. Teacher education centers should have a separate network. This enables them to exchange information, styles of functioning, new strategies & experiments and innovation in their field. Teachers must be given excellent training in setting and grading the question papers & preparing assignments. This can be used in teacher training networks.

- **Skilled educators**

  The educators who work with teacher trainees must be skilled in the use of E-learning. They must be able to apply technology in the presentation and administration of their course work and facilitate the appropriate use of technology by their teacher trainees..

- **Professional Development**

  Ongoing opportunities for professional development should be available and faculty and

administrators who participate in the preparation of teachers should be able to use it.

Technical Assistance

Educators need technical assistance to use and maintain technology. Timely technical assistance is necessary for faculty and teacher trainees to feel confident that they can use technology in their teaching and learning.

Involvement of the management

- Management should set policies for the introduction of E-learning. The policies should include clearly defined goals and specific ways in which E-learning can contribute towards the development of teacher trainees. Management should co-ordinate & promote on-line learning.

Type of Instructional Design

- Expert knowledge is required in order to decide whether or not a particular course should be converted to E-learning, and, if so, what types of content should be produced. In the United States, professionals in this field are given the authority to work literally as 'designers'. The goals should not simply be to reduce the frequency of classroom training, or to replace conventional classroom training with E-learning.

Establishing an Operational Organization

- Once E-learning has been introduced, regular maintenance and management tasks is required which will need a surprising amount of effort. Same as the classroom training, E-learning requires continuous site operations. Until and unless the sites are constantly refreshed and made attractive to the users, it will eventually lapse into disuse.
- To keep pace with the technological advancements & to enable the trainees to benefit from it, E-learning must be introduced as an essential area in the 'practical work' component. This would enormously help them to access information from the internet, to prepare teaching aids, graphics, handouts, pamphlets etc. This would also help them to receive lessons, both on-line & off-line, in teaching skills & strategies, child development, health education & other areas related to their education & training. For e.g. on www.educationworld.com students can receive all the information related to teacher education. Students can get ready lessons for their reference, both prepared by students as well as by teacher educators. In addition to this, information related to teaching aids, projects, study materials and all the latest information is available on this site.
- Establishment of a "E-learning Consortium" including member educational institutions to offer E-learning programmes.
- Using the strengths of software developers & programmes, teacher education institutions should develop their own platform for the delivery of E-learning materials. Facilitate development of small learning objects by teachers. Design courses in such a way that students have opportunities to produce ICT based instructional material themselves & share outcomes of the course with others. Provide a short foundation course that focuses hands on E-learning experience as the initial stage of pre-service training. Develop facilities for on-line training of teachers.
- Integrate ICT components into all the subject matters of areas such as Mathematics, Social Studies, and English & so on so that students have a role model for ICT integrated teaching & learning. While planning E-learning curriculum, ensure that it is congruent with the educational vision, the culture & the context of each region both locally & globally. Develop the vision and standards in stages starting with a core that can be expanded into a set of standards, implemented with E-learning for the preparation, continuing professional development of the teacher.
- The E-learning curriculum should facilitate change towards a more inclusive approach that promotes positive & supporting interdependence between students and teachers while maintaining individual accountability & autonomy.
- Start on-line discussion. This remote connection will help in accessing worldwide information & connecting to experts & peers through a variety of formats such as chat rooms, electronic bulletin boards & e-mails.
- Practical work assignment even for at least one topic in each compulsory course can be assigned, asking for collecting maximum information through internet & exploring various worldwide

educational websites e.g. for understanding structure of education at national and state level, & role of various agencies student-teachers can visit websites of NCTE, NCERT, GCERT, UGC etc. & can get information regarding their functionaries. Many websites are available which provide plenty of reference materials.

- **Accreditation OF on-line learning courses and programmes**
  In order to promote E-learning, it is important to develop teacher competencies in use of web-technologies, especially the use of E-leaning platforms that are considered as empowering tools for teachers. Reddi and Sinha (2003) emphasizing the need for capacity building and training says, "it needs to be understood that any new technology comes not merely with hardware and software, but with a learning and teaching style and grammar of its own, and that management practices need to be adapted in order to use the technologies effectively".

Teacher education institutions need to develop above stated strategies to assure that all future teachers are well prepared to use to new tools for learning. In fact, what we need is a combination of E-learning & classroom teaching techniques. The change must take place gradually. The program has to be well designed & publicized. The challenge for most educational organizations that aspire to provide E-learning is to get a good program that meets the learner's needs.

5. Conclusion
It is a well accepted fact that accepting ICT in Education is the only solution to meet the needs of globalization. Hence, teacher trainees must be provided opportunities to experience innovative technology supported learning environments in their teacher education system in order to keep our future generations updated and proactive. By including such innovative approaches in teacher education, professional development of teacher trainees can be increased.

References
1. Mohanty, Jagannath.(2005). Educational Technology, New Delhi : Deep & Deep Publications Pvt. Ltd.
2. Moturi, Ravikumar (2004). Information Technology For Higher Education, New Delhi : Sonali Publications.
3. Sanders, D.H.(1988). Computers Today, Singapore : Mc. Graw Hill Book Co.
4. Singh, P.P. & Sharma, Sandhir (2005). Computer Education : New Trends & Innovations, New Delhi : Deep & Deep Publications Pvt. Ltd.
5. Yadav, Neelam (2003). A Handbook of Educational Technology, New Delhi : Anmol Publications Pvt. Ltd.