

*Workshop on
Information Resource Management
13th-15th March,, 2002
DRTC, Bangalore*

Paper: DE

E-learning: A Myth or Reality

Satya Ranjan Sahu*

and

Madhuresh Singhal**

National Centre for Science Information

Indian Institute of Science

Bangalore –560 012

email: satya@ncsi.iisc.ernet.in*

email: madhuresh@ncsi.iisc.ernet.in**

Abstract

E-learning is a means of becoming literate, involving new mechanisms for communication, such as: computer networks, multimedia, content portals, search engines, electronic libraries, distance learning, and web-enabled classrooms. Different web based applications (e.g. email, real-time conference, WebCam) are being used as important tools in the process of e-learning. In India situation is far from reality but does not seem to be impossible to achieve the goal of e-learning. In this paper, the examples are taken from the point of the view of Library and Information Science.

1 Introduction

As we know the main purpose of education is teaching, training and learning. The process improves the knowledge and skills, which in turn helps to uplift the social status of individual. Today when the people talk about education, the conversation unknowingly turns to a new type of education called “e-learning”. Like everything else associated with digitization, automation and Internet, the term “e-learning” has also become a buzzword to much hype. Nevertheless, the main concern of “e-learning” is literacy of new kind. Hence it is a new form of social interaction to acquire knowledge or bringing out the inner qualities.

2 What is e-learning?

Basically e-learning is the online delivery of information, communication, education, and training. E-learning can be in offline form also like CD, DVD, etc. E-learning provides a new set of tools that can add value to all the traditional learning modes-classroom experiences, textbook study, CD-ROM, and traditional computer based training. It is characterized by speed, technological transformation, and mediated human interaction.

Simply we can underline the aims and objectives of “e-learning” as:

Old-world learning models don't scale to meet the new world learning challenges such as quick and up to date information, geographically scattered information. E-learning can provide the tools to meet these challenges.

- E-learning will not replace the classroom setting, but enhance it, taking advantage of new content and delivery technologies to enable learning.
- With e-learning we can empower learners as well as instructors.
- Digital media provides a variety of contents and delivery vehicles for diverse nature of learners to meet their requirements.

3 Scope of e-learning

This new mode of learning promises to transform the experience of the classroom in a number of fundamental ways: by augmenting traditional textbook materials with online resources; lectures through the use of rich multimedia and interactive content; and by extending student discussions beyond the walls of the classroom via a wide range of new communications platforms supporting inter classroom collaboration. As human capital becomes the chief source of economic value, education and training become lifelong endeavors for the majority of workers. E-learning offers us potentially less expensive, more convenient, and richer ways of becoming educated, and of coming into contact with more diverse groups of fellow learners than ever before. For example, use of discussion forums or conferences bring learner and instructor to a common platform of divergent nature.

If we talk about Indian scenario, it is still doubtful to make e-learning a useful media in our education programme. There are many obstacles. In our country, surveys show that the vast majority of population particularly teachers feel under prepared to use technology in the classroom. The fate of radio and TV as tool of educational process is better known to us with our past experiences of ‘Vidyalaya Karyakram’ and UGC country wide classroom programme respectively. Another approach to it is use of network using computers. But again many educational institutes are still without computer facilities or computer networking. Hence the benefits of “e-learning” in India remain largely inaccessible for large numbers of students. But realizing the promise of “e-learning” will require forging new kinds of government and private partnerships.

4 Elements of e-learning and their use

To take the better opportunities of “e-learning” we have to know the tools and techniques associated with “e-learning”. Some of them are:

4.1 EMAIL

Email is the foundation for all forms of online learning and teaching. Although we are taking email in a casual way but still it is very highly appreciable tools of “e-learning”. For example, email based discussion forums play an important role in the e-learning process. *Lis-forum* (moderated discussion forum) <http://www.ncsi.iisc.ernet.in/ncsi/services/lisforum.html> is a good example of this, where library and information professionals share their knowledge with other people through e-mail.

4.2 REAL-TIME CONFERENCING

It covers any form of online synchronous interaction. One of the simplest forms of real-time conference is online chatting. Here participants exchange typed messages with everyone having common interface. Others can see what a person is typing on the other side, all in real time. Each message is preceded by the name of the sender to identify who said what.

For example: Different messengers for instant messaging, such as Yahoo messenger, MSN messenger.

The instant messaging software provides interesting features for communication or sharing of knowledge. The use of file transfer protocol (ftp) gives it an edge due to which files can be transferred when the conference is going on between users.

4.3 MULTI USER DOMAINS (MUDS) AND MULTI-USER OBJECT-ORIENTED (MODS)

These are an interesting category of real-time conferences (virtual conferences) specifically designed to facilitate group interaction. MUD/MODs allow many people to share a virtual world, usually set up as “rooms” containing objects, which can be viewed

or manipulated. People can interact with others by sending chat messages as well as performing simulated actions. Here main features are:

- Real-Time Collaboration
- Interactive Data Sharing
- Instantaneous Communication
- Multi Location
- Share anything.

The excellent example for this is **eZmeeting** (<http://www.ezmeeting.com>). eZmeeting is a low-cost, no-maintenance document collaboration application. With eZmeeting, up to 32 people, on any Windows computer, can view, mark up, and comment on any document, together in real-time. With eZmeeting you don't have to ask. You DO, and everyone sees what you do as you do it. The comments you make, the changes you implement, the fixes are displayed on all participants' computers as they happen.

4.4 DESKTOP VIDEO

The most advanced form of real-time conferencing is desktop video system. A desktop video system is basically a chat system that uses video images instead of text messages. The video images (including audio) are captured by a small digital camera that is connected to the PC. These cameras are relatively inexpensive and can be connected to any computer (including laptops). Using software, that comes with the camera or is obtained separately, it is possible to connect to a server running a video conferencing program -- or make a direct link with another person using their IP address for a two person video session (called a point-to-point connection).

5 Techniques of e-learning

With the interaction models learning has become student centered and it is more enhanced by e-learning. The role of teachers changed from being primary source of

knowledge and direction to facilitator of learning. With the advent of computer-mediated communications (CMCs), the interaction between students and instructor is enhanced.

An explicit, five part model is used to guide tutor/student interaction in e-learning. The model may be summarized as follows (Gilly Salmon, 2000):

1. Access and Motivation (These are prerequisite competencies for online participation.)
2. Online Socialization (Participants establish online identities and networking with other participants.)
3. Information Exchange (Participants exchange information with the e-moderator and with one another.)
4. Knowledge Construction (Course-related discussions occur; interaction becomes more collaborative & fruitful.)
5. Development (Participants reflect and examine benefits from the system of interactions that help them achieve personal or course-related goals, explore how to integrate computer-mediated communication (CMC) into other learning, and generally reflect on the learning process.)

In online classes, it is the role of the e-moderator to guide students through an online learning experience where course content serves as a conceptual basis for continuing online interaction and discussions. The skills required to sustain this online interaction define the work of the e-moderator (Salmon, 2000).

Salmon also recognizes four issues as being critical to sustain appropriate levels of interaction and to help online students achieve successful outcomes:

- Appropriate numbers of online participants.
- The use of online time.
- Time and complexity.
- The development of online communities.

But all the above factors depend upon the aim and objectives of learning communities.

6 Essentials for e-learning

6.1 INTERACTIVITY AND PARTICIPATION

The most important thing in e-learning is to ensure that there should be a high degree of interactivity and participation. That means designing and conducting learning activities in such a way that it should result in engagement with the subject matter and fellow students. Coursework should focus on assignments and projects that are relevant and realistic in nature. It should involve plenty of opportunities for input from the instructor and fellow students.

The factor that strongly affects the amount of student interaction and participation is the level of instructor involvement. If the instructor regularly posts messages in the discussion forum or provides comments to students via email, this increases student involvement and participation in a course. So a cardinal rule of good online teaching is that the instructor must participate to get students to do likewise.

6.2 FEEDBACK

A primary task of the teacher is to provide feedback. In e-learning, teacher's feedbacks or comments are in email messages. They usually correct the original file submitted by the student and students can download it to see the comments. Ideally individual feedback is provided to each student, as well as group feedback. Group feedback can take the form of messages posted in a discussion forum or conference which summarize/synthesize the individual responses made on a given topic or activity.

6.3 MODERATING AND FACILITATING

E-learning requires good moderating and facilitation skills. Moderating involves encouraging students to participate in discussion forums and conferences, ensuring that certain students don't dominate, keeping discussions focused on the topic at hand, and summarizing/ synthesizing the highlights of discussions. Facilitation means providing

information that will help students to complete their assignments, suggesting ideas or strategies for them to pursue in their course work, and getting students to reflect on their responses and work.

6.4 FACULTY COLLABORATION

E-learning offers many opportunities for student interaction and it also provide many possibilities for collaboration among teachers and students. Basically the following kinds of collaborations can be thought of:

- Teacher – teacher collaboration
- Teacher – student collaboration
- Student – student collaboration

There is no face-to-face interaction like traditional classroom hence nobody feels ashamed or hesitation to present his/her opinion. It helps to modify or correct once fault.

6.5 STUDENT EVALUATION

One aspect of e-learning process that often generates considerable concern for teachers is evaluation of student performance. They worry that they will not be able to assess student understanding or participation properly. But this is a myth. Actually student evaluation can be done far more effectively online than in a traditional classroom setting because of the ease of creating online tests and other forms of assessment. Online tests can successfully hide students' as well as teachers' identity. So the biasness or personal inclination factors can be reduced to a great extent.

7 Conclusion

The use of information technology has the potential to enhance student-learning outcomes. However, e-learning can only contribute substantially to the improvement of institution\organisation if it is appropriately embedded in powerful and interactive

learning environments. The challenges are substantial. The effective use of IT in the learning process can best be achieved by taking an integrated approach to change involving the examination of pedagogy, curriculum and organizational structures within the community. Integral to this are well-articulated IT policies, the provision of appropriate access and adequate time for teachers and access to high quality professional development. From the above discussion, we can easily say that e-learning is not a myth. It is a reality and certainly it is going to influence the educational system in its own pace in near future.

8 Some useful resources

1. **Science Learning Network.** <http://www.sln.org/>
2. **U.S. Department of Education.** <http://www.ed.gov/>
3. **Homework Central.** <http://www.homeworkcentral.com>
4. **World Lecture Hall.** <http://www.utexas.edu/world/lecture/index.html>
5. **Training & Development Community Center.** <http://tcm.com/trdev>
6. **Educational Testing Service.** <http://www.ets.org/>
7. **Tech-learning.** <http://www.techlearning.com/>

9 References

1. **Elmer (Greg).** Web Rings as Computer-Mediated Communication. *CMC Magazine*, Vol.6, Jan-1999.
2. **Santoro (Gerald).** The Internet: An Overview. *Communication Education*, Vol. 43, 1994.
3. **Alavi (Maryam).** Computer-Mediated Collaborative Learning: An Empirical Evaluation. *MIS Quarterly* June, 1994, pp. 159-174.
4. **Salmon (Gill).** E-moderating: the key to teaching and learning online. *Epping Forest*, February 2002.
5. <http://ccism.pc.athabascau.ca/html/courses/global/edtech/conftips.htm>
6. <http://oubs.open.ac.uk/e-moderating/extracts.htm>