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NEED OF E-LEARNING FOR SUPPORTING INNOVATIVE ONLINE TRAINING AND ITS APPLICATION:AN ANALYSIS

M V Hanumantha Reddy[1], Dr.Amit Jain[2]
Department of Computer Science and Engineering
[1,2]OPJS University, Churu, Rajasthan (India)

Abstract

The most essential requirement and prerequisite for a successful implementation of e-Learning is the change of the learner's and the organizer's mind because the way of learning is so much different compared to traditional learning (e.g. learner centered vs. teacher centered) and offers other possibilities to integrate in the overall working or living process. In addition to that there is no single ideal way of using e-Learning efficiently, because there are different application scenarios which require different approaches. Maybe e-Learning alone is not the best way because it might be wise to combine it with traditional instructor led training, so-called "blended learning" (the mixture of different learning concepts and techniques). But at the bottom line we want to stress that e-Learning *can* help to improve the efficiency of learning tremendously if done properly.

1. OVERVIEW

In India, there are many states, many religions. e-learning provides the integrity of all institutions, research institutions, various regulatory bodies, academicians and professionals, students from various communities. e-learning provides sharing of knowledge, experience, technology, infrastructure and resources for the best utilization.

The demands of e-learning students can be fulfilled in India, by setting state of the art e-learning infrastructure of international standards in India itself. This will not only retain the Indian students in the country but will also attract affordable students from abroad. It will also create employment opportunities in India, for e-learning course material designers. The people who can develop multi-lingual courseware which can address special and complex topics will be on high demand. It will boost the revenue of Indian companies involved in the business of e-learning. As there is high demand of virtual classrooms (trainer free classroom) in India. Virtual classroom can really enhance virtual reality. Basically, virtual reality is a 3D learning environment which provide the learner to explore the learning concept. Modeling and simulations can make more experienced learning environments. To successfully, promote e-learning in Indian professional education, it is desirable that engineering colleges and universities should prepare virtual reality modules for various subject and the respective topics.

Potential barriers to successful development of e-learning require huge one-time cost in terms of development of educational content, installing large numbers of computers, providing internet

facility in the rural areas with cost of installing optical fiber cables as well as training students as well as teachers about usage of computers. Technology is dominant in e-learning, and is also expensive, unpredictable and can become obsolete. So, initial cost of implementation is very high

An e-Learning environment which works as an interface between the students and their learning objectives and provides different means to achieve the learning goal. Usually the e-Learning environment can be accessed using a Web browser over the Internet or Intranet and supports several learning strategies and different ways of interaction, communication and collaboration. Additionally, e-Learning environments often include administration and management utilities and interfaces to other systems to support the organizational part of learning as well. Other terms for e-Learning environments, which are often used as synonyms or with slight variations in its feature-set are e.g. (among many others):

- Computer Managed Instruction System (CMI-System)
- Learning Content Management System (LCMS)
- Learning Management Platform (LMP)
- Learning Management System (LMS)
- Virtual Learning Environment (VLE)
- Web Based Training System (WBT-System)

Preferably one or more e-Learning coaches (or teachers/trainers) that assist and guide students when trying to achieve their learning goal.

Much more comprehensive descriptions of e-Learning and its technical architecture are discussed in IEEE-Learning Technology Systems Architecture. Strictly speaking e-Learning is just one part, the learning part, and needs to be complemented by e-Learning and e-Teaching. Both terms can be summarized under the term e-Education. However, because most people understand e-Learning as the overall process, so the most suitable synonym to use is e-Education.

The second question is easier to answer, because the answer is simply no, e-Learning is not yet the best way to acquire new knowledge, but it has the potential to be the most efficient one for many situations, if it is used in the right way. This can be explained by asking and answering the question “What does the ideal learning environment look like?”.

The only need for adopting e-learning is major marketing effort and awareness about the benefits of e-learning. As an initiative, Ministry of Human Resource and Development (MHRD), University Grant Commission (UGC), All India Council of Technical Education (AICTE). Many programs like EDUSAT (education through satellite) and INFONET are existing e-learning

programs conducted successfully by UGC. There had been tremendous growth in IT industry but the same had been not reflected in education due to various limitation of traditional learning. However, proper implementation and use of e-learning can narrow down the gap between the industry and academics. By following the international standards, the Indian engineering colleges and universities can attract affordable international students. There is tremendous need of promotion of e-learning by the way of marketing and awareness program at national level.

2. NEED OF E-LEARNING

Need of e-learning is due to various reason. Web Based Training and its newer and more general synonymous term e-Learning are two of today's buzz-words in the academic and business worlds. Decision-makers associate with them new ways of learning that are more cost efficient than traditional learning strategies and which allow students to better control the process of learning because they can decide when, where and how fast to learn.

The first question can only be answered partly and vaguely because it is still under heavy discussion what exactly e-Learning should look like as many of the learner still feel traditional learning as better option over e-learning, and different opinions even exist about what components it consists of. e-Learning therefore can be roughly defined in the following way and focus later some of its aspects in more detail:

An ideal environment for learning

To answer this question, we do not have to deal with a lot of technology. We just need to look at the roots of learning and teaching as it was probably already practiced in e.g. ancient Greece.

In this ideal learning situation, we have a very qualified teacher who trains and guides one or just a few students whom he knows quite well (their personal background, their strengths and weaknesses, their personalities, how fast they can understand etc.). If there is more than one student then all students should have about the same level of knowledge and agreeable personal profiles, know each other quite well and love working together and helping each other. Direct face to face communication between teacher and students (and among students) allows to immediately react to requirements of students (questions, speed of teaching etc.). Thus, the teacher can individually respond to each of the students and motivate them. Also, all necessary illustration material is available that the students can use to understand the teaching subject more quickly and there are plenty of possibilities to practice and test the already learnt and use knowledge gained to solve problems with it.

This ideal situation will most probably lead to a very efficient learning process, no matter whether the learning goal is just storing some facts, carrying out processes, or whether they are

as complex as finding new solutions for difficult problems of a certain category (the learning subject).

Especially the fact that this scenario and all similar traditional learning strategies cannot deliver new knowledge to many students fast enough is the strongest argument which displaces instructor led training in the way described above. Additionally, new requirements such as lifelong learning and just-in-time learning arise out of short development and deployment cycles and continuously changing working profile. That is the reason why we and our economy need a new way of learning to continue to be successful.

3. LITERATURE REVIEW

Coffield*et al.* (2004) reviews that "the research field of learning styles needs independent, critical, longitudinal and large-scale studies with experimental and control groups to test the claims for pedagogy made by the test developers." (Coffield*et al.* 2004). One issue of criticism is that the most popular recommendation is that students' learning styles should be "matched" to their tutor. This "matching hypothesis" means that students' learning style should be similar to the instructional style. (Coffield*et al.* 2004) Smith, Sekar and Townsend researched this area and found that for each research study supporting the matching hypothesis there is a study rejecting it (Smith 2002). Graf and Kinshuk (2006) studied students' behavior in online courses in 2006. The behavior was studied according to learning style preferences. The FSLSM was also used in this study. The reflective learners spent more time on examples and dealing more intensively with outlines than active learners. Active learners performed better on questions dealing with facts. This is a point that is not supported by the FSLSM. T Much study has been addressed to learning styles but still the field over the subject is not clear. Many controversies rise from the fact that there are so many different learning styles. Each style deals with a different aspect on learning but there isn't a style which incorporates all. Manochehr (2006) has made a study where he compared "the effects on e-learning versus those on traditional instructor-based learning, on student learning, based on students learning styles". The result was that the learning style in traditional learning was irrelevant but in e-learning it was very important. The study showed that learners with an assimilating or converging learning style achieved better learning results in e-learning [1-5]..

Another point of criticism is the assessment tools of learning styles. The learning style questionnaires are based on several assumptions, the students are motivated to answer them properly and that the students are aware of their preferred way of learning. Also, social and psychological aspects can influence students' answers. (Graf 2007) [2, 6-11]

4. APPLICATION OF E-LEARNING

With e-Learning it seems that we have a new strategy which meets all demands and still provides an efficient way of learning by incorporating learning theories and combining them with new technological advances. Analysts such as META, GARTNER, Forrester, IDC etc. confirm this when they predict tremendous growth for e-Learning.

- **Factors Are Facilitating the Growth Of E-Learning**

Primary, secondary and post-secondary education. This includes schools at different levels, high schools and colleges & universities. New possibilities here are, just to name a few:

Virtual universities which provide access to (high quality) education otherwise not possible for some students due to time or spatial constraints or because it is too expensive to implement.

Bringing together pupils and students from different countries to better understand other cultures and prepare for the globalized world and ensure peace between nations.

The chance to better support pupils and students with different needs e.g. by providing more individual supervision, support and possibilities for practicing, or by offering a broader or deeper spectrum of information for highly interested individuals.

With the new communication and collaboration functionalities of e-Learning, which are also available outside school, change the drill and practice fact learning to more independent but guided knowledge acquisition.

However, the amount of e-Learning in the sense of virtual learning that seems to be useful differs much between primary and post-secondary education schools, because primary education also has the additional goal of socializing children which cannot be done yet by e-Learning in a sensible way. Therefore, in this case it is more an additional way of learning and teaching and not a replacement.

Assured rapid knowledge transfer: Inform employees about things they do not even know exist in a controlled way so that it is verifiable that the information has been consumed and understood.

Human Capital Management (HCM): This is a more focused and strategic training of employees depending on their future employment and career path. The training can be done with blended learning (mixing different learning strategies, e.g. ILT and e-Learning), but coordinated and controlled by skill gap analysis and skill management (as part of an overall e-Learning architecture).

Just in time (JIT) knowledge: learn what and when you need it. This requires that the learning system is accessible at any time and easy to use to concentrate on the knowledge and problem solution and not on the system.

Keeping up in times of rapid change increases the individual's worth and is the prerequisite for career advances. Even in our everyday life new tools and concepts have an impact and require ongoing learning. E-Learning could be a good and cost-efficient solution which allows learning at home.

Life-long learning: Short production cycles, the short half-life period of knowledge and new ideas continue to revolutionize business and our everyday life. As an individual or as an employee "What you Know" equates to "What You Are Worth". Employers buy Skills and Know How.

Quick distribution of information about new products and strategies which have a short life span to a large number of employees. Traditional learning strategies are not able to perform a "rollout" to several hundred or thousand employees within short time.

Virtual corporate universities: Especially in large enterprises with many employees it makes sense to have one centralized trainings department, the so-called corporate university. However quite often large companies have many branches and offices which are distributed over several countries or even continents. In this case it is much more efficient to make large parts of the training virtual to cut down traveling costs and absence of the workplace and offer distant education within a virtual corporate university.

Working life (corporate training sector). Here e-Learning has its main advantage in its elimination of the border between learning and working. However, this does not mean that learning can be done completely on the side, because learning is a mental process that still needs its time and environment. It means that learning can be better integrated in the working process. Examples for this are:

5. IMPORTANCE OF E-LEARNING

Most of the universities are having their distance learning program divisions (DLPD) and virtual classrooms. These virtual classroom and virtual institutes are growing at high speed to replace the traditional classroom learning (c-learning) with the emerging e-learning technology.

"Good Teaching is good Teaching, no matter how it's done" –that stands true for e-learning, as e-learning brings new dimension to education.

e-learning provides flexibility

In e-learning, playback of recorded sessions is possible, so the absentees can play the recorded sessions and slow learners can listen the recorded session as many times as they want. This is unique flexibility provided by e-learning.

6. CONCLUSION

The collaborative learning theory says that, human interaction is most important in the learning process. The unique feature of c-learning is personal touch, eye contact and face to face interaction with the students of classroom. Body language is one of the most stimulating and motivating factor of traditional classroom learning. The unique advantage of c-learning are the major drawbacks of e-learning. Hence, e-learning cannot completely take over traditional c-learning, still e-learning can bring considerable revolution in Indian professional education system. So, e-learning has tremendous potential in India, but adoption of e-learning in Indian education system has been very slow. Indian e-learning market is at a nascent stage and has very bright future.

For, success e-learning system in India, designing of e-learning packages need to be done carefully. Human interactions are very important in learning, so interaction of human with e-learning tools should be encouraged through audio/video conferencing programs. The drawback of e-learning however can't be completely eliminated, still interactions of students seating in virtual class rooms can be made more frequent with the expert faculty using electronic boards, chats, emails and teleconferencing systems. There should be a fixed time or slot in which teleconferencing / chat sessions can be arranged.

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