Technology Enhanced Learning

– the new mantra for the 21st century

Adopting eLearning for Education & Training

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In today's complex business scenario technological changes increase complexity and velocity of work environment. Technology has changed the way we live, work, think and learn. Today's workforce has to process more information in a shorter amount of time. New products and services are emerging with accelerating speed. As production cycles and life spans of products continue to shorten, information and training quickly become obsolete. Training managers feel the urgency to deliver knowledge and skills more rapidly and efficiently whenever and wherever needed. In the age of just-in-time production, just-in-time training becomes a critical element to organizational success. Hence, one can aptly say that eLearning can play a significant role in building human capacity within the organization resulting in increased production and at the same time it will add to profits because of reduced training cost complementing the traditional mode of training which is far more expensive and less productive.

eLearning can be defined as an approach to teaching and learning that utilises Internet technologies to communicate and collaborate in an educational context. This includes technology that supplements traditional classroom training with web-based components and learning environments where the educational process is experienced online.

eLearning has moved the possibility for training to any Web browser. It allows for learner time and place independence, expanded distribution of course materials, greater control over the quality of the learning materials, the shortening of training time, lower travel costs, the tailoring of instruction to individual needs, smaller units of instruction, automatic creation of student activity records and completion logs, easily updated content, and the potential for greater interactivity.

A recent report cites statistics related to the need for more skills and knowledge to compete in the new economy. Fully 85 percent of new jobs will require at least a high school education compared to just 65 percent a decade earlier. The need for more education at all levels combined with extremely hectic lifestyles has forced individuals, companies, and governments to deal with eLearning issues perhaps faster than any other educational innovation of the past two centuries.

The Corporate world has been the main driver of eLearning. The main uses have been corporate training and knowledge management initiatives that are gradually merging, as organisations become more and more knowledge driven.

Corporate Training

eLearning has quickly impacted corporate training in a variety of ways. It has altered training goals and expectations. It has also created a mechanism to develop and

implement programs when and where needed. eLearning is shown to be effective in changing organizational culture so as to facilitate the sharing of knowledge instead of continuing to reward the hoarding of it.

It has been predicted that the number of corporate universities will exceed traditional ones by 2010 (Fortune, 2000). With these trends, there are movements away from single event-based live training, to continuous and collaborative learning where learners share best practices and ideas.

There are many reasons why eLearning is entering the workplace. Firms view it as a new way to ***deliver instruction, boost worker productivity, broaden training opportunities, reduce costs, improve instructor productivity, stay competitive, improve motivation and morale, and implement strategic initiatives.*** Travel costs are reduced since training is now locally available for off-site personnel, instructors are not held to certain geographic boundaries, and more students can view presentations simultaneously. There are also cost savings from fewer hours away from the workplace and lower internal training expenses. And after the events of *September 11, 2001,* there is a distinct psychological advantage in attending training virtually, instead of physically, given the pervasive fears of travel and hassles of additional security precautions.

"There's a better way to build technology and business skills. Web-based courses let people learn in their spare time. The material is always available for quick reference...Best of all, you don't have to have a super-fast Internet connection or lots of money….and since they're on the web, all you need is a browser to get started."

In terms of motivation employees will perceive eLearning as a fun and engaging learning opportunity rather than as electronic page turning.

Technical Education & Training

Technology enhanced learning is now considered to be an important mode of learning for institutions of higher learning like engineering colleges, universities, research bodies and others. In India, the first ever ***International Conference on eLearning*** **"VIDYAKASH 2002"** was held in Navi Mumbai from 15th – 17th December 2002 by NCST under Department of Information & Communication Technology, Government of India. This shows that the Government is thinking seriously and many such initiatives has been taken by other institutions like *Commonwealth Educational Media Centre for Asia* **(CEMCA)** who has taken great initiatives in taking eLearning forward. An institution like *Commonwealth of Learning* **(COL)** is a vibrant player in the field of eLearning. Recently *Computer Society of India* **(CSI)** has taken lot of initiatives by organizing eLearning seminar and conferences and to create general awareness in the country through its various chapters. Professional bodies like NASSCOM, CII, Chambers of Commerce have taken the eLearning concept as an important agenda in many of their seminars and conferences.

The Ministry of Human Resource Development has taken number if initiatives in promoting ***technology enhanced learning*** in the country under the World Bank initiative to various technical and polytechnic institutions. The *UGC* has started funding for eContent Development Project and *AICTE* through their MODROBS

schemes. The Indian Space Research Organisation will shortly launch an educational satellite "EDUSAT" for the various universities and educational institutions so that they can impart training and education through eLearning mode using the satellite. This is considered to be a very positive step taken by the Government of India in promoting technical education in the country using technology enhanced learning technique popularly known as ***'eLearning'***.

Reusable Learning Objects (RLO)

Instructional designers and corporate trainers working with eLearning often use the term ***"reusable learning object"*** (RLO). RLOs are granular chunks of information that teach one or more objectives and can be meaningfully incorporated into multiple training contexts. To be useful for an organization's knowledge management strategy, RLOs must provide user access, content modifiability, content standards and interoperability in terms of platform and delivery mode, consistency in the design and development of content, and the scalability of digital entities. Other applicable terms include flexibility, durability, adaptability, customizability, interchangeability, and affordability. In effect, RLOs allow training to be updated instantaneously and constantly. Meta tagging of those knowledge bits will allow learners to find and utilize reusable knowledge objects quickly and efficiently. While knowledge may "never generate itself", technology can help in the process of sharing, stretching, compacting, and re-purposing it. As template-based design and sharing of knowledge becomes the norm, the development cycle of content and courseware will hopefully be shortened. However, agreed upon standards and specifications will be needed and a number of such standarisation initiatives have started producing results (AICC, IMS, ADL, IEEE, etc.).

Knowledge Management

Recent business buzzwords, such as "e-learning," "learning organizations," and "communities of practice," indicate that the management of learning is growing in importance. Chief Learning Officers **(CLOs)** and Chief Knowledge Officers **(CKOs**) are often charged with overseeing a company's learning programs and new initiatives.

The informal sharing of knowledge between employees is common in most work settings. Whether the sharing of information is over cubicle walls, in the lunchroom, or at the water-cooler, the exchange is typically very local and often imperfect. Even when technology appears to drive the information flow, it is the social world or network that binds people together. ***"As corporations increasingly recognize knowledge as their most valuable resource of competitive advantage, they must devise systems for fast and efficient transfer of knowledge. It is not enough for a company to generate mountains of knowledge if it has no means of knowing what it knows".*** Given that perspective, electronic sharing and exchange of education and training could become the most important task of a successfully functioning organization, if that is not already the case.

Online Communities

The development of the Web has allowed for the creation of ***online communities***. A community is defined as "the set of people who occupy a given structural location in an institution or society…most communities engage in some degree of collective cognition—the interactions through which they learn from one another's experiences, set common strategies, develop a shared vocabulary, and evolve a distinctive way of thinking. These interactions might take place through war stories, newsletters, rumors, speeches, philosophical tracts, music videos, management consultants, or bards who travel from place to place bearing news." This notion has been taken a step further by pointing out that when people "congregate in virtual places" and develop new ways of sharing their common interests and pursuits, they are forming or participating in a "community of practice."

Use of ***asynchronous*** (threaded discussion lists, content sharing, notice boards, etc.) as well as ***synchronous*** (chat, conferencing, co-browsing, etc.) modes of collaboration techniques are being increasingly adopted in implementing these online communities.

World-wide companies up to now, have pushed themselves hard to implement their own eLearning systems in the organizations and have succeeded in developing their employees for the future business. According to some reports, several high advanced corporates in the world have already started transform and deliver 80 to 90% of internal training chances in the cyber space.

Speedy impetus and applicability into the workplace are key elements for the better eLearning setup but it is a pity to say that many corporates had unfortunately neglected the clear fact that successful eLearning systems should require the well balanced integration of the systematic instructional design techniques and the advanced web based technologies. Here is the major reason why full eLearning experiences and speciality are necessary for adopting and implanting eLearning practices into organizations.

The President of India, Dr. APJ Abdul Kalam in several of speeches in recent times has urged organisations and states to join in the endeavour to transform the country into a ***"Knowledge Society"*** by the year 2012. This is a clear indication what India as country and the technical institution, corporate and the Government in general should think about in the era of globalisation and liberalisation when knowledge is considered to be a key actor. The world is now a global village and continuous international interaction has become an essential component for human survival. This mainly because of enhance social interaction and promotion of international understanding. Educational institutions like engineering colleges, polytechnics, universities & corporate training institutions should spend more on human capital development.

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