# CHAPTER 2

**E-LEARNING: THEORETICAL FRAMEWORK**

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Introduction

“Every student in our schools should learn to know how to use the latest technologies for aiding their learning process. Universities should equip themselves with adequate computing equipment, laboratory equipments, and Internet facilities and provide an environment for the students to enhance their learning ability.”

- President Dr. A.P.J. Abdul Kalam, 2006 (President of India)

E-Learning or electronic learning, as defined by The American Society for Training & Development (ASTD), covers a wide set of applications and processes such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It is also defined, as “Web-Based Training (WBT), e-learning or on-line learning, that resides on a server or a host computer that is connected to the World Wide Web (WWW).” E-Learning, in a nutshell, is a method of delivering learning packages through Internet.

The designers, developers, and implementers either make or break the courseware. Whatever the learner can do right or wrong with conventional courseware, they can also do with e-learning courseware. E-Learning is for the individual; learners can learn at their own pace and spend time only on the knowledge and skills that they wish to learn. Furthermore, they can use the search feature to find just the information they require need.

E-health interventions have the potential to augment care for the management of chronic diseases viz, diabetic problems, heart diseases and asthma problems. Instructions given in managing these diseases often function as a key to the well-being of patients and their families but are not reimbursable in the current health care system. A theoretically defined interactive multimedia program has been described, one which would assess the patient’s and or a family member’s level of readiness regarding specific therapeutic functions for diabetic, asthmatic and heart ailments. Here, Web-based Learning, e-Learning and Online Learning are taken as being synonymous with one another.
E-Learning Entry: The History of e-Learning

"The greatest resource of any nation is the creative energies of its people. They must gain the skills demanded by a new economic world. Only when literacy and learning are widespread will the benefits of the global economy be widely shared."

-- President George W. Bush (2001a)
(President of U.S.A.)

In the mid-nineteenth century correspondence education was developed in Europe (namely in Great Britain, France, Germany) and in the U.S.A and spread swiftly. The first official recognition of education by correspondence was from 1883 to 1891 by the Chautauqua College of Liberal Arts (Bizhan, 1997). In the late 1800s the University of Wisconsin and the University of Chicago were among the premier universities to establish major correspondence programs in the United States.

The establishment of the National University Extension Association in 1915 provides evidence that remote learning was an established feature of educational culture. Educators were concerned about developing appropriate teaching models for distance education. From 1910 through 1920, technology allowed new media to change the way instruction was delivered. The first catalogue of instructional films appeared in 1910 and by the 1920s motion pictures were used for education.

By the late 1960s and early 1970s significant changes had occurred in long distance learning due to the development of new media technologies and delivery systems (Karatekin, 2001). As a result of successes in satellite communications that began in 1965, there were increasing levels of experimentation with transmitting educational programs via satellites by colleges and universities. By the 1970s, many tools were commonly used for long distance education including videotapes, programmed instructions, the television, and the telephone. There were also advances in the quality and accessibility of previously used media such as slides and film.

As cable TV and video teleconferencing became more widely available in the 1980s, the possibility for some two-way distance learning programs evolved as interactive communications became feasible.
Long distance education grew at an unprecedented pace in the 1990s. The advent of the Internet and digital applications, combined with the changing demographics of the distance education learner, added a whole new dimension to long distance education. These new technologies brought and continue to bring educational opportunity to the non-traditional student, and the lure of economic prosperity to higher educational institutions.

Distance education is delivered not only to adult learners, but students of all ages. Satellites allow the television and radio programmes to be broadcasted worldwide. Teleconferencing as well as two-way audio and video communications are becoming more common. Multimedia programs are being distributed on CD-ROM and over the web. The Internet and distance learning have created a new business and a new teaching pedagogy (Kimberly et. al., 2004). Students interact with instructors and one another using chat rooms for synchronous dialogue and threaded discussions for asynchronous communication. The availability of Web-based communication has facilitated the phenomenal growth of distance education opportunities. E-Learning will come to play a major role in delivering timely information in a convenient and affordable manner. Distance education will have an increasingly prominent role in the delivery of instructions to people in less developed countries or remote locations where traditional education is not attainable.
E-Learning in Education: An Educational Revolution

The impact of the electronically connected world on the learning and training of individuals and organisations is the primary revolution in Education. The 21st century is "Globalisation" and "Telematic" (computers connected to networks). They denote the emergence of new global cultural forms, media, technologies of communication and most significantly, the telematic revolution (Vasanthi, 2001). The effects of e-Learning on the training profession are revolutionary, challenging most of its basic tenets. The change comes from outside influences: new players in other disciplines, forces in the supplier market, and the kind of learning that technology is increasingly making possible. Using interactive technologies can bring huge benefits to the way we teach and learn, but at the moment there is not enough of it happening in this country. All learners, from pre-school to lifelong learning, can benefit from mixing these new technologies with other forms of study. We must make sure those benefits are universal.

The first wave of the e-Learning revolution was (and still is) mainly focussed on delivery: Learning Management Systems (LMS), to organise the delivery of learning material; Learning Content Management Systems (LCMS) to create the learning material; Virtual Learning Environments (VLE) to deliver learning. In fact, the use of the 'learning' is hardly accurate, as the reality of the provision is still mainly about training. Although we know that probably more than 80% of what we learn is learned informally, the first wave of e-Learning has been almost exclusively focused on formal learning. The 'newest' concept of 'blended learning' reinforces the focus on the delivery mechanism: 'mixing' face to face and distance training. We have not moved very far beyond the simplistic vision of e-Learning as 'technology enhanced learning (Learningcitizen, 2005).

The development of what became known as Computer-based Training opened entirely new areas of both opportunity and uncertainty. The new learning medium was evidently neither a book, nor a classroom, nor a television programme and there were no words to describe it what it was. As a result practitioners, strategists and commentators were forced to fill this linguistic vacuum by creating new words and borrowing terms for development processes and products from traditional disciplines. The results were often unwieldy, inexact and unsatisfactory. The development of multimedia technology
compounded this problem by creating a convergence between television, radio and print media and their associated development methodologies (Learningzone, 2004).

Today the term Computer Based Training (CBT) is sometimes used to describe mute computer-based courseware without video content as distinct from Multimedia, which combines text, graphics, audio and video. This tends to defy logic, since it tends to imply that Multimedia is somehow not computer-based. The term e-learning encompasses the delivery of communication, skill and underpinning knowledge. This holistic approach is entirely appropriate and will hopefully encourage practitioners to place a greater emphasis on the importance of effective communication in the context of learning.

While the first wave of e-Learning technology was mainly organisation-centred, the e-Learning places the focus on the need to develop a new generation of tools that are completely centred on the person. And in doing so, the e-Learning as individual learning planner, or continuing professional development planner, or personal knowledge management toolbox can become the hub, from which each individual will have the power to join, create and organise learning communities, at learners school or the university, professional association, workplace or local community. The e-Learning is the expression of learning as social activity. In early e-Learning systems, the social dimension of learning was generally catered for by 'enhancing' basic delivery mechanisms of training material, through the adjunct of synchronous or asynchronous discussions.
E-LEARNING THEORY: COMMUNAL CONSTRUCTION

"The E-Language Learning Project. Given the importance of second language skills in today's global economy, the U.S. will launch an initiative that will use the Internet to help students learn a second language. The initial focus will be on English, Chinese, and Spanish, which are expected to be the dominant languages on the Internet."

-- President George W. Bush (2001b)
( President of U.S.A.)

Communal constructivism is an approach to learning in which students not only construct their knowledge (constructivism) as a result of interacting with the environment (Social Constructivism), but also are actively engaged in the process of constructing knowledge for their learning environment. Holmes et al. (2001) have suggested that the advent of new educational technologies warrant a new kind of educational theory - 'communal constructivism.' Social constructivism, as a broad theoretical framework regarding how people learn, argues that learning, taking place within 'situated' learning contexts, is optimised (Oliver and Herrington, 2000). It is frequently suggested, however, that while traditional teaching methods prove largely inadequate for cultivating such environments, C&IT-enabled approaches to learning are particularly adept at doing so.

Modern approaches to teaching and learning, such as constructivism, which involves the active formation and adaptation of thoughts and ideas (Howe and Berv, 2000), problem-based learning and experiential learning, assume that knowledge is acquired through social negotiation, experience and reflection. This construction results from two different types of interaction in the learning process (Bates, 1991). At the outset, this is an individual affair between the learner and the learning material, which may range from the traditional textbook to computer-based simulations. The second is a social activity, between the learner and the tutor, the facilitator or other learners. Cognitive restructuring occurs as learners revise their ways of thinking to provide a better fit to reality when faced with discrepancies between their own ways of viewing the world and new information (Rogoff, 1990). Social interaction with tutors and facilitators is expected to promote development through the guidance provided by interaction with people who are skilled in solving the problems emerging from the learning activities (Rogoff, 1990).
E-LEARNING DESIGN: CONCEPT, PRINCIPLES AND DESIGN MODELS

"Technology and knowledge would play an important role in value-addition to our core competence of natural and human resources, a must for achieving our vision of 2020, that is of sustained economic development".

- Dr. A.P.J. Abdul Kalam, 2003
(President of India)

Educational practices are key in order to work back from the desired learning outcomes. In higher education, these outcomes are invariably associated with higher-order learning – becoming a critical and creative thinker. Recently, dispositions such as self-directions have been added, because it is not a simple matter of having the student take responsibility for their learning. Critical reflecting and discourse are also demanded from the teacher for purposes of selecting and organizing the content for diagnosing possible misconceptions and ensuring quality-learning outcomes.

Critical thinking and discourse is central to the e-Leaning framework. It is a cognitive model that naturally starts from the inside and looks out. The phases of critical thinking are the triggering event, exploration, integration and resolution. Self-directed learning addresses issues of management, monitoring, and motivation. Self-directed learning is an important conceptual model towards understanding issues raised by technology that has the potential to transfer enormous control to the learner.

Traditional education restricts the development of self-management practices, such as self-directed learning, and restricts the use of technologies, such as e-Learning, as technical self-management support. The role of the learner and modes of cognition are changing due to necessity. If e-Learning is to be more than simply enhancing current information-assimilation practices, then both cognitive and self-management strategies must be incorporated (Blogspot, 2005).

The most promising objectives of the teaching-learning process is to facilitate learners in deep levels of understanding and practicing, not simply the recall of factual information. Learning objects include the application components of the critical content of a course or module. In the traditional taxonomy of learning (Bloom, 1956; Bloom,
1964), the cognitive domain, which is considered the core of learning experiences, includes the following stages:

1. Knowledge; where the learner is engaged in activities like remembering, memorising, recognising, recalling identification and recall of information;
2. Comprehension; with activities like interpreting, translating from one medium to another, describing in one’s own words, organisation and selection of facts and ideas;
3. Application; which includes problem solving; applying information to produce some result; use of facts, rules and principles;
4. Analysis; which looks at understanding how something has been put together; finding the underlying structure of a communication; identifying motives; separation of a whole into component parts;
5. Synthesis; a process that aims to create an original product, and to form a new ensemble using ideas that come from the analysis process;
6. Evaluation; In this phase, a learner makes valuable decisions about issues; develops opinions and judges decisions, and resolves ambiguity regarding a certain problem.

Principles:

Web-based design principles are derived from an analysis and synthesis of the literature on situated cognition (Lave & Wenger, 1991); Vygotskian thought (Vygotsky, 1978, 1981) and learning through participation in communities of practice. Hung and Chen (2001) derived the following four principles of learning to guide the design of web-based e-learning environments: commonality, situatedness, interdependency and infrastructure respectively (Table 4).
TABLE 4: SELECTED INSTRUCTIONAL DESIGN CONSIDERATIONS FOR E-LEARNING

<table>
<thead>
<tr>
<th>Principles of Situated Cognition and Vygotskian Thought</th>
<th>Instructional Design Considerations for Online Teaching and Learning</th>
</tr>
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<tbody>
<tr>
<td><strong>Commonality</strong>: Learning is a social act leading to identity formation and associated membership of a community of practice</td>
<td>E-Learning environments should capitalize on social and collaborative communication with others who have shared interests</td>
</tr>
<tr>
<td><strong>Situatedness</strong>: Learning is reflective, metacognitive and embedded in rich socio-cultural contexts</td>
<td>E-Learning environments should enable students to work on activities and projects that demand reflection on authentic practice</td>
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<tr>
<td><strong>Interdependency</strong>: Learning is socially mediated and facilitated through engagement in practice with others</td>
<td>E-Learning environments should generate interdependencies that benefit from the diverse expertise in the learning community</td>
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<tr>
<td><strong>Infrastructure</strong>: Learning is facilitated by activity, accountability and associated support mechanisms</td>
<td>E-Learning environments should incorporate facilitating structures, accountability mechanisms, and associated rules of engagement</td>
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(Source: Adapted from Hung and Chen, 2001)

The most effective learning environments are problem-based and involve the student in four distinct phases of learning viz. Integration, Activation, Application, and Demonstration. Integration means that new knowledge is integrated into the learners’ world. Activation means new knowledge builds on the learner’s existing knowledge. Learners recall or apply knowledge from relevant past experience as a foundation for new knowledge. Application means, the learner applies new knowledge. This is the practice phase where learners are required to use their knowledge and skills to solve the problem. This could be a posttest or guidance by a tutor or coach. Demonstration means, new knowledge is demonstrated to the learner. Learners learn when the instructor demonstrates what is to be learnt rather than merely telling information about what is to be learnt.
**Instructional Design Models**

The simplest instructional models are having five basic stages viz. Analysis, Design, Development, Implementation and Evaluation.

In Analysis stage, first establish the use of complete instructional design process. Secondly, the investigator should find the needs of the learners. Finally, the objectives of the learning subjects are important. It should satisfy and easily attain the academic achievements of the learners.

In the Designing stage, the Instructional Designer looks at the subject matter, establishing the steps of instruction and the platform on which it is going to be delivered. Here the instructional designer will lay out the objectives for the learners and the more specific the objectives are, the more precise can be the design of the learning experiences. This is an important point since we all learn best as part of an experience.

The Development stage is a process whereby the learning experiences are created and tested. Depending on the size of the project, groups or individuals from the intended audience can take part in this process and hence, in doing so, refining the final product. From this you can determine four important points:- 1. Have you accurately analyzed the learning needs of the target learners? 2. Were the aims and objectives of the learning programme appropriate for the target learners? 3. Are the available resources and the learning experience itself adequate to meet the aims and objectives? 4. Is the learning by itself measurable or will it be impossible to find out if the programme has worked? The answers to these questions will enable revisions to be made before it is too late.

In the Implementation stage, the programme is “rolled out” to the students at large. In a corporate environment this will involve a strategy in itself since it will need internal marketing, the establishment of some form of learning management system to monitor track and control the learning programme and much effort to ensure that learners are motivated to start and finish the programme. It may be that this learning programme involves different platforms of delivery and the implementation must ensure that these are coordinated together. Finally, the learners will take their learned skills or understanding into the workplace.
The evolution of the World Wide Web (WWW) is considered the "new pedagogy of learning" (Muske, Goetting, & Vukonick, 2001). In the Evaluation stage, the most important outcome of this phase is to gauge the success for the learners and whether the learning materials were effective. The outcomes of the last evaluation phase will identify where the learning programme is succeeding and failing and consequently will produce areas that need analysis again. Hence the circle is completed and the learning process continues to evolve. The aim of e-Learning is to provide the lead in the use of best practice in all aspects of learning technologies.
EMPOWERED LEARNERS: POWERFUL TOOLS FOR LEARNING

"We shape out tools, and thereafter our tools shape us."

(McLuhan, 1995)

Advances in e-technology are changing the way, how people access data. In many ways, however, the emerging technology is compelling Extension practitioners to compete with private enterprise and other educational institutions. Unlike synchronous and site-based learning, people can use e-learning tools wherever they are "24/7" year round (Robert, 2005).

E-Learning is now an essential component of education. Globalisation, the proliferation of information available on the Internet and the importance of knowledge-based economies have added a whole new dimension to teaching and learning. The American Society for Training & Development (ASTD) online dictionary describes e-Learning as a term that covers applications and processes such as Web- and computer-based learning and virtual classrooms. It also includes the delivery of multimedia content via CD-ROMs, DVDs, the Internet, audio- and videotapes, satellite broadcasts, interactive TV, and more. These are learning tools that many people currently use. There are benefits to be gained from embracing e-learning tools that are interactive, effective, and fun.

There are different types of E-Learning Tools that can be used on the Web. In Teaching-Learning process, e-Learning tools can be classified in to two categories viz. synchronous tools and Asynchronous tools. An asynchronous tools such as video conferencing and teleconferencing, helps to communicate between learners and facilitator via computer forum of some description at different times. Synchronous tools such as discussion forum, e-mail, and chatting, take place the learners and the facilitators in real time environment. The learners and facilitator are present all at the same time, but not necessarily in the same place.

Learning and practicing of Yoga through online makes beneficial improvement for learners on Self Reinforcement, Self-Interaction, Self-Assessment, Self-Analysis and Self-Awareness.
E-LEARNING IN THERAPEUTIC ASPECT: LEARNER SELF-EMANCIPATION

Education is, in this case, a drive for self-awareness and a force of emancipation. The term "competency" in SLC is meant to focus on the development of independent self-learners as a goal of training and education as distinct from the narrower use of the term "self-learning", which refers to "individualized delivery systems", often utilizing Web based packages: SLC therefore means an active self-managed learning competency, which can be contrasted with its opposite, a (passive) receptivity to being trained/educated" (Claudio et. al, 2004). Emancipation means complete self-support and financial independence.

Yoga is a spiritual quest. However, along the path of yoga, the aspirant also gains health, happiness, tranquility and knowledge, which are indicators of progress and an encouragement to continue their practice. Buddhism and other Eastern spiritual traditions use many techniques derived from Yoga (Cedric, 2005).

The goal of acquiring knowledge was the realization of spirit, life, and emancipation of humanity and the purpose of production of knowledge was the moral and spiritual guidance of a nation. Consequently, the two contradictory notions of knowledge exist simultaneously in today’s Universities, resulting in a constant—but ultimately confused and ineffective redefinition of their role and function in the society. The goal of acquiring learning was the realization of spirit, life, and emancipation of humanity and the purpose of production of knowledge for the moral and spiritual guidance of a nation (Polsani, 2003).

Emancipation (Kaivalya) is attained when there is equalization of purity between the principle of understanding (Sattva) and the Self (Purusha). Emancipation (Kaivalya) comes when the gunas, becoming devoid of any motive for action for the Self (Purusha), are reabsorbed into latency. In this state the Self (Purusha) is established in its own nature, which is the energy of pure consciousness or cosmic ideation. There is complete identity of emancipation (Kaivalya) and supreme peace (Nirvana). Emancipation (Kaivalya) is the state, which subsists in the Self (Purusha). In the state of emancipation there is the vision of the Self in the entire cosmos and of the cosmos in the Self. Absolute Existence, Consciousness and Bliss constitute the plenitude of the Self, and beyond these is the Attributeless Self (Raghavan, 2004).
Withdrawing the senses from their objects, one should fix the mind upon the soul; having previously undergone the severest austerities, one should practice the concentration of mind that leads to Emancipation (Sacred, 2005). Yogis, freed from all bonds, to attain the sinless path that leads to Emancipation. When Purusha attains Kaivalya, emancipation, it sees without error, and this is gained through experience in self-correction and self-mastery. From the highest standpoint, this means that Purusha preserves its freedom and intrinsic purity by avoiding mistaken assumptions and false conclusions. From the standpoint of any individual involved in Prakriti, unbroken discriminative cognition (Vivekakhyati) is the sole means to emancipation, for it releases the abiding sense of reality (Purusha) in him (Raghavan, 2002). Right conduct on the moral and mental planes can remove various obstructions to the rapid unfoldment of the vast potential of consciousness and that complete realization of Purusha known as self-emancipation (Kaivalya). To the yogis, his mind serves as the director of any number of mental matrices or emanated minds, which can carry out semi-independent functions under its supervision. Just as the presence of Purusha quickens and facilitates the fertile expansion of consciousness, so too the controlled mind of the yogis stimulates intellectation everywhere. The yogis can work through the receptive minds of mature disciples, aiding all humanity by strengthening its spiritual aspirations.

In the same way today we cling to asana and pranayama only, overlooking the real goal of Yoga, that is emancipation not only from our physical defilements, but from our mental defilements too. Nobody has attained emancipation so far by merely observing precepts or penance. Nobody has attained emancipation merely by practicing pranayama neti or dhauti etc.
E-LEARNING GATE: ENDLESS DEVELOPMENT

"The next big killer on the internet is going to be education. Education over the internet is going to be so big it is going to make email usage look like a rounding error."

CEO, Cisco Systems, John Chambers, (COMDEX 1999)

Today, Internet and World Wide Web have enhanced learning activities providing a high degree of interactivity among geographically separated learners and teachers. E-Learning platforms have become one of the top ten current information technology issues in higher education (McGee 2003). Technology directly affects the display, the interaction, the cost, and the design of the educational context. Other notable components include the instructional design, the effect of evaluation and accreditation, the personalities, motivations, the teaching and learning styles of participants, and the hidden curricula embedded in all formal education contexts.

During the last 15 years there has been considerable research and development into the use of Information and Communication Technologies (ICT) for learning. E-Learning environments have become readily available during the last 5 years. Just-In-Time learning, any time, at the learners’ own pace, at any place, and flexible learning styles, the future looks bright. Despite this, only a small percentage of learners, especially in India, are using e-Learning environments.

In First Generation, the aim of e-Learning was to make the computer the instructor, resulting in an approach that took the traditional classroom instructional model into a virtual environment. Consequently, for the most part it resulted in putting text and courses online – delivering basically conventional educational products and services such as manuals, textbooks, papers, training courses, lessons and workshops in a new way. As technology developed, especially in the context of the Internet and a web-based world, the technical sophistication and methods of delivery have improved significantly. Hence there are “first generation” applications that are technically unsophisticated (i.e. presenting content messages online as vast scrolls of text or slide presentations that learners scroll or click to view), alongside other applications that are highly sophisticated (i.e. incorporating a high degree of interactivity, animation, streamed video, multiple
choice learning assessment, and video-game-style simulations where learners are expected to progress through various lessons, or levels of learning, until they are able to demonstrate pre-defined competence according to the testing systems built into the learning modules. The common feature linking these low-tech and high-tech approaches rests in the underlying learning design. Learners have to follow a predetermined learning path — usually linear, though technically sophisticated case studies and simulations may also allow “trial and error” learner decisions that permit detours until the “correct” or required path is discovered or until they fail and need to start again.

In Second Generation, e-Learning approach is based on a “learner-in-control” pedagogy that is primarily geared to achieving applied, performance-oriented learning. The second-generation approach has to be designed from the ground up to provide a network of interconnected learning opportunities rather than a library of separate online texts and courses. This allows learners to integrate all their learning around personal or organizational learning objectives — such as improved competence and job performance — by drilling down to exactly the kind of learning they need, when they need it. “Second generation” learning, in contrast, is non-linear, self-organizing, and open-ended. Using a holographic design (whole in the parts) principle, the aim is to create modular yet interconnected learning nuggets that allow the learner to “drill down” whenever he or she pleases, to create an unique, yet coherent learning path of his or her own. This learner-in-control approach reflects a key element of the “second generation” e-Learning philosophy and leads to learning designs that seek to empower learners to take ownership of the learning process itself.

The identification of recurrent themes across the corporate and academic scenarios garnered nine major conclusions about e-Learning’s future in the next five to ten years. First, advances in e-Learning technologies will continue to occur. These advances will be wireless, highly intelligent, interactive and integrative, accessible and easy to use. Second, e-Learning technologies will allow for a humanized learning environment. E-Learning will integrate the whole notion of location independence without being tied to a keyboard or monitor. Online teams will be able to see and hear each other in real time on enlarged computer screens that will have high resolution. Third, e-Learning will become a ‘matter of fact’ because e-Learning will become so much a part of what we do and learn; the lines between doing and learning will become blurring. Fourth, as
e-Learning takes prominence in organizations, organizational structures will continue to flatten, management levels will continue to decrease, outsourcing will continue to increase and telecommuting will become a norm in the organizational culture. Fifth, e-Learning infrastructure will be responsive to learner diversity. This diversity will extend but not be exclusive to age, nationality, ethnicity, educational background, intelligence levels, learning styles, language and learners’ needs. Sixth, e-Learning customers will be self-directed, operate on flexitime, be technologically savvy, have high collaborative fluency and be intrinsically motivated to pursue life-long learning. Seventh, e-Learning was also seen as a possible threat to collaborative work, because of issues such as intellectual property, everyone becoming interested in personal gain and security concerns. Eighth, global partnerships between corporate and academics will increase because e-Learning infrastructure will be so versatile and integrative that it will facilitate quick connection, decrease coordination cost, broaden the level and variety of resources, address short-term and long-term needs, and have immediate impact on the job. Lastly, e-Learning will not operate on traditional norms of what a standard education is, rather e-Learning will be about meeting the learner’s needs for improved performance. Getting an engineering degree might not be the solution to becoming a successful, skilled engineer. Both the corporate and academic scenarios, both in their process and products, can serve as an environmental scan resource to help envision an organization’s strategic approach to e-Learning in the next five to ten years. In addition, both the academic and corporate representation provides a more in-depth perspective on the direction of e-Learning.

Finally, e-Learning will move towards ever greater degrees of personalization and user control. Technologies - LMSs, Google, launch lists, and more - will enable users to access content that has been pushed to them or that they have pulled into their world. Beyond technology, greater personalization is inevitable because learning is the delivery of an organization’s strategic vision, so it must be tied to incentives and rewards. The learning must be linked to clearly defined and agreed upon milestones in a worker’s career path.
### TABLE: 5 U.S. E-LEARNING INDUSTRY: A MARKET ANALYSIS

<table>
<thead>
<tr>
<th>Sector</th>
<th>2002</th>
<th>2006</th>
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<td>K-12 Academic</td>
<td>$1.8</td>
<td>$11.0</td>
<td>$18.0</td>
</tr>
<tr>
<td>Higher Education</td>
<td>$1.5</td>
<td>$23.0</td>
<td>$44.0</td>
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<td>Corporations and Business</td>
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Source: brandon-hall.com

This report is part of the brandon-hall.com 2002 Market Analysis Series. Each report in the series focuses on a regional market or an emerging market trend in the e-Learning industry. There are special editions on selected topics of interest to users, sellers and buyers examining pertinent issues and trends in each sector. The analysis in this report is based on information culled from the extensive collection of brandon-hall.com research. Information from vendor, buyer and user interviews is used in the analysis. Industry experts and specialists were consulted on specific issues. A targeted number of vendors, customers and suppliers were polled in the process of creating this report. Raw data from federal tax records, government economic and educational statistics, industry association statistics, and custom calculations are used to form the background context for the analysis. The forecasts are made based on currently available data and are subject to change based on economic and industry conditions. The analysis in this report is based on the perspective of e-Learning industry experts and thus provides a unique perspective not available in analyses provided by financial firms. This report is also unique in that it considers the perspective of end-users and not just the perspectives of the seller or the purchasing representative within an organization (Simmarket, 2005).
The next-generation pedagogically sound e-Learning tools can be divided into 3 categories which are 1) communication Tools, 2) student involvement tools, and 3) instructional design tools.

Communication Tools are integrated video services, which must become a standard offered by all of the next-generation e-Learning platforms. The next-generation e-Learning tool must offer students more varied ways of communicating their ideas and thoughts. For example, the students should be given a chance to write an evaluation as they go through the learning materials, adding a note, comment or annotation if they feel like it, capturing and collecting their own personal library as they go along. Next-Generation e-Learning tools must allow users to annotate and comment learning material as well as provide tailored content feeds providing exactly what the students want. It must support mobile learning. This means that students are able to use their mobile devices as a part of their e-Learning. At this moment, existing e-Learning platforms have already started to incorporate plug-in tools that work with mobile devices. For example, a Japanese widely used e-Learning platform called Ex-campus now has incorporated plug-in tool called I-Tree that allows students to visualize the current status of interactivity on the discussion forums as a wall screen on their mobile phone. In addition, many platforms now have an option of sending text messages to mobile devices indicating new postings. Much research is currently being conducted to investigate the possibilities of integrating e-Learning functions/ tools into mobile devices.

Currently, most of the e-Learning platforms already offer a variety of student community-building tools within their products However, the next-generation e-Learning platforms must be able to draw upon a tool that can support collaborative learning among peers with a more structured scaffold approach. This can be done in several ways. For example, this new tool must give clear and direct instructions on how to collaborate with peers effectively (i.e. how to write your reflective journal; or how to critique and comment on classmates’ work;) when needed. Or, a template-driven or wizard-type tool should be developed, one that can help students to focus on their assigned task as well as sharpen their reflections prior to sharing their ideas. With these next-generation tools, we should strive to have a richer collaborative learning environment.
Instructional Design Tools Presently, existing instructional design tools are simply tools that help instructors to create learning sequences in small steps, for example with lesson templates or wizards. However, next-generation e-Learning tools must offer better help for instructors to design meaningful learning environments for their students starting with the first step of writing meaningful objectives to the final step of assessment. A simulation-making tool is not just some scripted instructional material / presentation making tool. On the contrary, to strengthen the learner’s conceptual learning, the tool must help create a representation of the material in a manner that places the learner within a context in which the material would actually be used.

The next-generation e-Learning tool must allow users (both instructors and students) to share and reuse learning resources across course containers, and support the reuse and interoperability of learning resources. In addition, it must allow instructors to register their learning resources with an option to designate their resources to be private or publicly accessible. In addition, to facilitate storing and accessing of learning resources by instructors, it is indeed indispensable for the next-generation e-Learning platforms to integrate a central content repository supporting standards. Some e-Learning platform users are now facing difficulties locating where things are, or how to navigate to where they want to go within the platform. In the next-generation of e-Learning, a more simplified navigation, in which related tools are grouped or linked, is needed. In addition, a user-friendlier interface design should be created and adopted in the next-generation e-Learning platforms.

The next-generation e-Learning platforms should be able to draw upon a tool that can learn about their users' by gathering information through their interactions and utilizations (Hodgins, 2002, Kajita, 2004). At present, e-Learning platform developers are trying to develop the next-generation e-Learning tool, which is self-adapting. Such an e-Learning tool would be able to understand the context of interactions (events or actions) between users and the system. For example, by acquiring the user's log-in data such as where the user logs in from, the speed of the users connection, and the device or system the user is using to connect to the platform, the tool would be able to customize services to suit the user's conditions.
This information could be used to filter unnecessary images to a low speed connection or turn on or off additional features based on the user's browser. In addition, such a tool should be able to capture observed patterns, recognizing behaviours of the user. For example, this next-generation tool must be able to learn about the user's learning competency (through the user's input) and be able to adapt its services accordingly.
EMERGING NEED: PHYSICAL EDUCATION THROUGH E-LEARNING

The physical, mental, and social living conditions of every human being is in a pathetic state. War, criminal offences, innumerable diseases anxiety, suicide, terrorism are increasing everyday on a large scale. Man is unable to find peace and is always restless in search of material possessions.

This is due to improper education, which lacks to instill self-control, self-analysis, and self-satisfaction in the mind of the learners. The educational system of today is more focused on equipping the learner to find locative jobs and luxurious life. It lacks the ultimate purpose of developing every individual into a better person for the society.

This scenario needs to be changed. Every human being must experience peace and harmony in the society. This can be achieved only by murdering human values right from the days of primary education. A sound education will build strong human values in an individual. Unless an individual is comfortable with his/her self, he cannot be comfortable with others.

The age-old practice of yoga is well acclaimed for its goodness in relaxing the human body and mind. Training centres may not be suitable for regular practice because every one has his/her own preoccupations. So self-training at their own place is suitable for an individual. Hence physical condition through e-Learning mode is an emerging need worldwide today.
CONCLUSIONS

"Asia-Pacific e-Learning Alliance. Ten companies from the United States and Asia, including Sun Microsystems, AOL Time Warner, Cisco Systems, Parsons Brinckerhoff, Applied Materials, Saba Systems, Fujitsu, Daesung Group, Acer Enrich, and YTL e-Solutions, have formed an alliance to identify and promote the policies and practices that encourage information technology development and training. This year they are conducting studies of how e-learning can improve education and boost productivity."

-- President George W. Bush (2001c)
(President of U.S.A.)

E-Learning is becoming increasingly prominent in YOGA education. All available evidence points toward growing enrolments and provision albeit from a low starting point. However, after the hype of the new economy, growing disenchantment with e-Learning has replaced over-enthusiasm. Failures of e-learning operations have, at least temporarily, overshadowed the prospects of widened and flexible access to YOGA education, pedagogic innovation, and decreased cost that was once embodied by e-Learning. One of the strongest arguments for promoting e-Learning lies in its potential to improve and even revolutionize teaching and learning.

Introducing e-learning tools and resources may be one way that educators can assist students in achieving the multiple learning goals of exploration, communication, and collaboration beyond the framework and boundaries of the traditional classroom. The “learning object” model is perhaps the most prominent “revolutionary” approach to date. A learning object can be described as an electronic tool/resource that can be used, re-used and redesigned in different contexts, for different purposes and by different academics/actors. E-Learning is a tool that has the potential to ensure sharing of knowledge, between experts, among colleagues, within businesses.

From the above discussion we clearly understand the potential improvement of e-Learning in different areas. This study helps learners to learn and practice Yoga through online for three Diseases viz. Diabetes, Asthma and Heart Problems. It includes various Multimedia tools, such as Audio, Video, Animation, and Still Pictures, and Web-based applications. The result of the study is presented in the following chapters.