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WHITE PAPER: ALL ABOUT E-LEARNINGS

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Abstract

Companies looking to reduce costs and improve overall productivity are considering alternatives to traditional skills development programs. As broadband services become more ubiquitous and data storage costs decrease, the worldwide e-Learning market has expanded.

While cost reduction is often a key business justification for implanting an e-Learning program, online training offers several advantages, including:

Elimination of travel costs

Consistency – no bad instructor days

Scalability from a few users to a worldwide deployment

Flexibility to allow users to learn over a period of time

Modularity to provide customization options

Tracking capabilities to measure skills and confirm compliance

Reporting capabilities to identify skills gaps in an individual or department

This white paper was designed to provide you with an overview of e-Learning and to help you cost-justify an e-Learning implementation and/or determine the benefits, if any, e-Learning may provide your organization.

Market Insight

The worldwide corporate e-Learning market reached \$17.2 billion in 2008. IDC forecasts that it will grow at a CAGR (Compound Annual Growth Rate) of 8.0% to approximately \$25.4 billion by 2013.

Classroom training still represents the primary delivery choice for most training organizations, although it is now used less often. A significant number of organizations are also using formal on-the-job training as a key component of their overall education programs.

What is an e-Learning?

Introduction

e-Learning is an emerging mode of training in modern times, it is preferred over the conventional methods of learning due to its low cost and least dependency

The American Society for Training and Development (ASTD) defines e-Learning as a broad set of applications and processes which include web-based learning, computer-based learning, virtual classrooms, and digital. Much of this is delivered via the Internet, intranets, audio- and videotape, satellite broadcast, interactive TV, and CD-ROM.

Many terms have been used to define e-Learning in the past. For example web-based training, computer-based training or web-based learning, and online learning are a few synonymous terms that have over the last few years been labeled as e-Learning. Each of this implies a "just-in-time" instructional and learning approach.

There are various definitions, descriptions and types of e-Learning but the specific type this document is referring e-Learning to is Technology Enhanced Learning (TEL).

Technology enhanced learning (TEL) has the goal of providing socio-technical innovations (also improving efficiency and cost effectiveness) for learning practices, regarding individuals and organizations, independent of time, place and pace. The field of TEL therefore describes the support of any learning activity through technology.

Essentials of e-Learning

Instructional Design

Instructional Design is the practice of creating "instructional experiences which make the acquisition of knowledge and skill more efficient, effective, and appealing. The process consists broadly of determining the current state and needs of the learner, defining the end goal of instruction, and creating some "intervention" to assist in the transition.

Since TEL are the student only learning unlikely the classroom led. It is not just a presentation to present the content but it's a specially designed IDS (Instructional Design System) using ADDIE methodology which stands for 1) analysis, 2) design, 3) development, 4) implementation, and 5) evaluation. Instructional design is the basic property of an effective TEL or e-Learning.

Interactive

One of the methodology of IDS is cognitivism (learn by doing things), generally referred as classroom exercises that involve the thinking process, in which learner do something and in reaction he learns. In e-

Learning environment, this is achieved by the introduction of interactivity. A good example can be a set of images a learner clicks curiously and in response something happens to increase his learning.

Measureable

One of the most essential part of e-Learning is learning measurement, it contains quiz, questions, exercises to measure the learner's involvement and learning during and after the training. The results are recorded and shared with the trainer and training department.

Modular and Time Bound

The e-Learning should be modular to keep the learner interested. Each module comprises of at least one interactive exercise, and should end on at least one question to judge the learning progress. Completion of each of the module should be recorded. The e-Learning and its each module should be delicately time bound to keep the learning curve up throughout the training.

Accessible

The learning should be available online all the time so that learner can attend the e-Learning at his preferred time. It is generally done to keep the learner attentive throughout the training.

What are the merits of e-Learning?

Efficient

An e-Learning solution efficiently uses resources to train multiple people. After the initial expenditure in the content and technology has been invested, the variable costs of providing e-Learning to multiple students are minimal. For example, an instructor performing synchronous e-Learning can support multiple students in multiple locations, limited primarily by time zones and broadband capabilities.

30% time saving as per Fletcher, J. D., (Evidence for Learning from Technology-Assisted Instruction).

Globally consistent

As workforces become more distributed and employees work away from the home office, e-Learning provides a global solution to synchronize worldwide skills.

Scalable

e-Learning solutions scale more easily than traditional classroom training. Variable bandwidth expense and the infrastructure for transmitting data are the key variable costs to scale an asynchronous e-Learning program.

Accountability

e-Learning solutions can provide tracking mechanisms that record attendance, completion and time spent on specific training modules.

Anytime Anywhere

e-Learning solutions allow a learners to learn at their convenience, unique location and/or during their time preference. Students may pause and resume training at their convenience. e-Learning facilitates remedial learning and post-training support.

Business Continuity

e-Learning solutions makes business continuity possible even while training and at no additional financial or human resource expense or engagement. Similarly to get a team trained; we do not need to arrange multiple training sessions to ensure the business continuity.

Improvements in Employee Productivity

Improvements in employee productivity can provide a measurable return for a training solution. An IBM training assessment and implementation at an energy company with 1,000 employees found that companies can save significantly on labor costs with minimal investments in employee skills development. The study concluded that training which produced an average productivity improvement of only three minutes per day would save the company at least US \$240,000 per year.

Assumptions:

Annual average employee salary is US \$40,000, or US \$20/hr

Employees worked 50 weeks per year

1,000 workers saved three (3) minutes per day, or one hour per month

Table 1 IBM study measuring an energy company's return on investment (ROI) for training based only on employee productivity gains*

Variable	Value
Average salary per employee	\$40,000 USD
Hours worked per year	2,000
Number of employees	1,000
Time savings / productivity gains per day	Three minutes per employee
Total Return on Investment	\$240,000 USD

**The study did not consider the ROI in categories such as reduced travel, reduced product failure, less-frequent and shorter help desk calls, improved customer service, compliance, increased employee morale/retention and revenue gains.*

Cost Bennefit

While considering the training expenses, following are the costs that are to be considered for classroom training;

- Tuition
- Employee travel (transportation plus unproductive salaried hours)
- Lodging
- Vendor costs
- Instructor expenses
- Administration
- Real estate/room rentals (if any)

e-Learning significantly reduces all these costs, it is just one time cost which is rather an investment, as it shall be reused again and again for years to come. As per Clark Aldrich (Research Director, Gartner Group)

"e-Learning is becoming a commodity. Companies are looking at E-Learning programs like a stapler or reams of paper-- it's just one item in their inventory."

According to Training Magazine (2002) 50% to 70% of the training cost can be saved by replacing instructor lead classroom trainings by e-Learning.

500M\$ per year are saved by US Department of Defense by replacing 58% of their classroom trainings with e-Learning.

CLOs reported they opt for e-Learning because it is the most appropriate medium for the subject matter to be conveyed. Asynchronous e-Learning is preferred when needing to train a group with varied skill levels. With the global financial crisis putting budget pressure on training spending and, more importantly jobs, cost is the preeminent driver (IDC, Corporate Learning Buyer Survey Series 2010: Economy Influences Modality Choice, Doc # 222511, March 2010).

What are the demerits of e-Learning?

Initial investment

The costs to develop content and establish an e-Learning infrastructure can be significant. When establishing an e-Learning program, the overall lifespan of the program will help calculate the amortized investment. The expenses may hit the ledger in Year One, although the e-Learning program may have a lifespan that lasts several years.

Inappropriate content

The content must match the medium. Complex issues that require hands-on learning may not fit the model. Alternatively, a blended model that incorporates some e-Learning with hands-on instruction may be more productive.

Technology issues

As bandwidth and hardware costs continue to decrease, e-Learning becomes more relevant as a learning solution. Remote areas with limited bandwidth may not be able to realize the benefits of e-Learning. e-Learning solutions must also fit the broader technology requirements of a company; the e-Learning solution should be compatible with existing systems to reduce implementation costs and time.

Diminished personal interaction

e-Learning limits personal interaction and social cues. Body language and other visual forms of communication are dramatically limited with e-Learning. Instructors may find it difficult to gauge a student's comprehension of the subject matter.

Employee acceptance

As more employees become familiar with digital communication, acceptance for e-Learning grows. Some employees, particularly those who are technophobic, may feel uncomfortable with online training. Cultural issues may also inhibit the use of technology for training.

Motivation

e-Learning, particularly asynchronous training requires students to take the initiative to start and complete the training. Some students may not be motivated to allocate the time to learn; organizations may consider corporate mandates, such as "conditions of employment," or, alternatively, rewards and incentives for completing the task.

e-Learning Feasibility Essentials

Table 2: Merits and Demerits of e-Learning

Benefits	Disadvantages
Reduced costs	High upfront costs
Efficient	Content may not fit the medium
Globally consistent	Technology / bandwidth issues
regardless of location	Diminished personal interaction / social cues
Trackable	May not fit the culture / employee mindset
Convenient anytime scheduling	Students who are technophobic may suffer
Scalable	Requires motivation / self-starter mentality
Reduces travel costs and downtime	

Source: IBM Training Recommendations, 2010

Table 3: Learners matched to appropriate training modality

Mode	E-Learning	Classroom
Learners are geographically dispersed	⌚	
Learners are technologically savvy	⌚	
Learners reside in a central location		⌚
Learners are inexperienced with technology		⌚
Learners live in different time zones or have staggered work schedules	⌚	
Learners have varying levels of skills / knowledge	⌚	

Source: IBM Training Recommendations, 2010

Summary and Recommendations

The training business is slowly shifting from traditional classroom instruction toward e-Learning. To fully capture the value and benefits an e-Learning program can provide, organizations must consider available content, user/cultural preferences for training modalities, specific training needs and their adaption to the e-Learning format, geographical dispersion of students and the total cost of ownership for the program versus the costs savings.



About the Author

Najeeb Haider is Managing Partner at Securucon Pvt. Ltd. If you have any questions about this document or need to consult regarding your training authoring or needs please contact Mr. Najeeb at nhaider@securucon.com.



vCard: Najeeb Haider