

The value of e-learning



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Introduction

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.

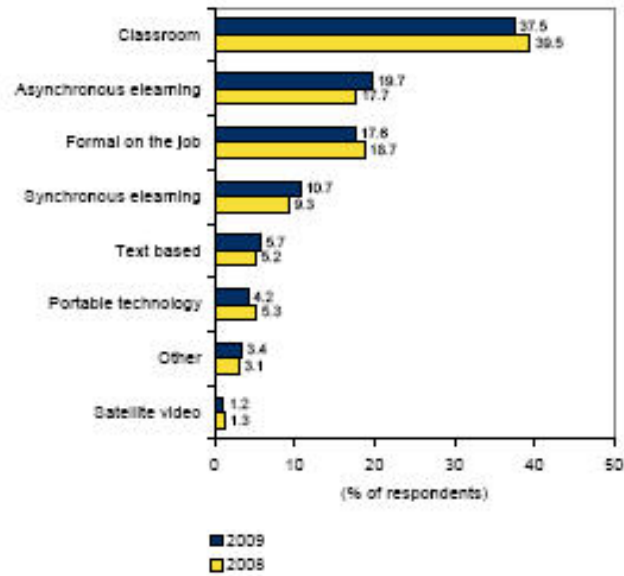
Overview of the Market

The worldwide corporate e-learning market reached \$17.2 billion in 2008. IDC forecasts that it will grow at a CAGR of 8.0% to approximately \$25.4 billion by 2013. Content (rather than systems or delivery) represent the largest segment of the e-learning market, accounting for well over half of total spent. ¹

Classroom training still represents the primary delivery choice for most training organizations, although it is now used less often. The combination of synchronous and asynchronous e-learning represents the next most popular modality. A significant number of organizations are also using formal on-the-job training as a key component of their overall education programs. ²

Classroom still represents the primary delivery choice for most training organizations although the combination of synchronous and asynchronous e-learning is gaining ground.²

Table 1: Current Classroom and e-Learning Training, 2008 and 2009



Source: IDC's Learning Modality Survey, 2009

A majority of enterprises select the modality simply based on content availability; the content they want is available in an ILT format or e-learning or whatever, and that is the modality they offer. While organizations like the concept of blended learning and learner-centric design, they are constrained by the available content.³

Types of E-Learning

E-learning is a broad term that includes a number of training methods and modalities. Vendors often define new terms for their offerings to differentiate themselves from the market. Most e-learning methods can be subdivided into two categories, asynchronous and synchronous learning:

Asynchronous E-Learning

Asynchronous learning is a student-centered approach to learning, as opposed to a teacher-centered approach where a live instructor interacts with the student. Asynchronous learning became popular in the early 1900s when the postal system provided a means to deliver correspondence courses. Asynchronous

All learning modalities have their strengths and weaknesses. The phrase "know your audience" is particularly applicable with the various forms of e-learning available today.

training can be delivered informally using simple online reference cards or web-based applications, including:

- Self-paced virtual training
- Computer-based Training (CBTs)
- Wikis
- Discussion boards
- Blog sites
- Frequently asked question pages

Asynchronous learning may include content that follows a linear progression that leads to a test or validation of knowledge transfer. Although some asynchronous learning requires a student to complete a task during a pre-established time period, other programs allow a student to ponder and contemplate complex issues.

Many successful asynchronous learning programs provide a live facilitator who can shepherd and support the learner during training.

Synchronous Learning

Synchronous learning is sometimes defined as instructor-led online learning because it involves an interaction between a student and an instructor or leader during a preset time period. Using web-based conferencing tools, including voice and data, students interact with a teacher to learn a task. Unlike asynchronous learning, synchronous learning allows students to interact instantly and eliminates the feeling of isolation that is inherent in asynchronous learning. Synchronous learning also requires students to participate and engage because quick responses are required by the instructor.

Table 2: Synchronous vs. Asynchronous learning

Synchronous	Asynchronous
Students interact with a live trainer/facilitator and other students	Students learn independently and potentially in isolation
Learning is scheduled and has a fixed start time and end time	Learning is available anytime and potentially anywhere
Learning is linear	Learning may be linear or freeform

Source: IBM Training Recommendations, 2010

E-learning solutions scale more easily than traditional classroom training. Bandwidth expense for transmitting data is the key variable cost to scale an asynchronous e-learning program.

Benefits and Disadvantages

All learning modalities have their strengths and weaknesses. The phrase "know your audience" is particularly applicable with the various forms of e-learning available today. Listed below are benefits and disadvantages of e-learning that should be considered before implementing a solution:

Benefits

Reduced cost. The primary driver for most e-learning decisions involves an overall reduction of cost, including reduced instructor costs, travel expenses, room rentals, lodging and meals. The amount of time spent away from work for classroom training can be significant and should be factored in the overall learning time compared to 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.

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.

Universal access to experts. Asynchronous e-learning eliminates "bad instructor days." E-learning provides cross-border access and/or exposure to expert knowledge and top instructors.

Trackable. E-learning solutions can provide tracking mechanisms that record attendance, completion and time spent on specific training modules.

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 could be amortized for several years.

Convenient. Asynchronous e-learning solutions allow a student to learn at their convenience, unique location and/or during their time preference. Students may pause and resume training at their convenience. Asynchronous e-learning facilitates remedial learning and post-training support. Synchronous e-learning allows students in different time zones to attend early morning or late evening training.

Reduces/eliminates travel. Depending on company policies on security as well as bandwidth availability, e-learning can eliminate or reduce travel expenses.

Disadvantages

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.

The experience, locations and availability of learners represent key variables to determine whether e-learning or hands-on learning is a better fit for an organization or department.

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.

Table 3: Benefits and disadvantages of e-learning

Benefits	Disadvantages
Reduced costs	High upfront costs
Efficient	Content may not fit the medium
Globally consistent	Technology / bandwidth issues
Access to experts – 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

Implementing an E-Learning Program: Success Factors

Ultimately, companies must determine the best delivery modality to facilitate knowledge transfer quickly, completely and affordably. The experience, locations and availability of learners represent key variables to determine whether e-learning or hands-on learning is a better fit for an organization.

Table 4: Students matched to appropriate training modality

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

Source: IBM Training Recommendations, 2010

Developing a Business Case for 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 was also 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.⁴

Measuring Performance

Better measures of learning and delivery performance fall into two categories: performance of the learner and business impact:

Individual performance. "Time to competency" measures how long it takes for people performing critical business processes to become proficient. For example, how long does it take for a sales representative to learn how to sell a new product or for a customer support agent to learn how to solve customer problems? Other metrics might assess the effect of learning on the amount of the individual's output, the quality or customer satisfaction.⁵

As much as 40% of public classroom training costs are spent on travel and lodging. Sales and business losses from downtime should also be evaluated.

Business impact. The business metrics to justify your investment may include:

- Higher revenue
- Reduced support desk calls (quantity and duration)
- Shorter time to market for products
- Streamlined technology rollouts
- Improved use of business processes
- Faster (and proven) compliance with regulations and company policies
- Improved customer/employee retention
- Diminished customer problems and faster response times

Measuring the Cost Savings vs. Classroom Training

IBM estimates that as much as 40% of public classroom training costs are spent on travel and lodging. To determine the real cost of classroom training versus an e-learning solution, you should consider the following costs:

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

Lost opportunity is a real cost. For example, if an employee must spend eight hours traveling to a training class, the employee salary is just one expense: sales and business losses from downtime should also be evaluated.

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

A productivity gain of just three minutes per employee per day could save a company with 1,000 employees at least \$240,000 USD.

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 5: 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 month	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.

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. The implementation plan should include an instrument to measure the return on investment in categories such as productivity gains, reduced travel, reduced product failure, less-frequent help desk calls, improved customer service, compliance, increased employee morale/retention and revenue gains.



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Endnotes

¹ IDC, Worldwide and U.S. Corporate eLearning 2009–2013 Forecast: Cost Savings and Effectiveness Drive Slow Market, Doc # 219499, August 2009.

² IDC, Corporate Learning Buyer Survey Series 2010: Economy Influences Modality Choice, Doc # 222511, March 2010.

³ IDC, Corporate Learning Buyer Survey Series 2010: Economy Influences Modality Choice, Doc # 222511, March 2010.

⁴ IDC, Corporate Learning Buyer Survey Series 2010: Economy Influences Modality Choice, Doc # 222511, March 2010.

⁵ Gartner, Inc., The First 100 Days for Learning and Development Leaders, August 2009