

E-Learning Advantages

Reduced Learning Times

With e-learning, “results comparable to those of instructor-led training have been achieved in 40 to 60 percent less time.”

- Zenger, J., Uehlein, C. *Why Blended Will Win*, T+D (formerly Training and Development Magazine), ASTD, August 2001, pg. 57.

Over 30 studies have found that interactive technologies reduce learning time requirements by an average of 50 percent.

- Miller, R. L., *Learning Benefits of Interactive Technologies*, Multimedia and Videodisc Monitor, February 1990, pg. 14.

“There is very strong evidence that computer-based training requires less time for training compared to instructor-led training. The amount of reduction ranges from 20-80 percent, with 40-60 percent being the most common.”

- Hall, B., *Web-Based Training Cookbook*, Wiley Computer Publishing, New York, 1997, pg. 108.

Office Depot used a virtual classroom to simultaneously training students in Florida, California, and Texas, thus increasing enrollment by a factor of three while increasing student satisfaction by 30% and knowledge retention by 25% while simultaneously decreasing costs by 80%.

- Horton, W., *Designing Web-Based Training*, Wiley, New York, 2000, pg. 26.

Fletcher after carefully reviewing over forty independent studies found that Technology Based Training (TBT) yielded a time saving of 35-45% over traditional classroom instruction while obtaining equivalent or better gains in learning retention and transfer.

- Fletcher, J.D. (1990, July). Effectiveness and Cost of Interactive Videodisc Instruction in Defense Training and Education, Washington DC: Institute for Defense Analyses.

Adams (1992) reported the following results of Technology-Based Training (TBT):

- TBT produced a 60% faster learning curve as compared to traditional instruction;
 - Students had up to 50% higher content retention for TBT over traditional classroom instruction;
 - TBT students demonstrated 56% greater gains in learning than did students who were taught by traditional instruction;
 - Consistency of learning was up to 60% better for students taught through TBT over those taught by traditional methods;
- Adams, Gregory L. (1992, March). "Why Interactive?" Multimedia & Videodisc Monitor

Dziuban and Moskal (2001) reported that blended courses at the University of Central Florida replaced face-to-face class time with online learning so that a three-hour course occupied only one hour of actual face-to-face classroom time. Such courses allowed the weekly operation of multiple classes in a classroom previously occupied by only one course, thus making more efficient use of existing university infrastructure. Moreover, they reported that blended courses, when compared to traditional courses, had equivalent or reduced student withdrawal rates as well as equivalent or superior student success rates.

- Dziuban, C., and Moskal, P. (2001). Evaluating distributed learning in metropolitan universities. *Metropolitan Universities*, 12(1), 41 – 49.

Increased Retention Levels

“The process of interaction with material being studied provides a strong learning reinforcement that significantly increases content retention over time. In a typical example, **Spectrum Interactive** reported more than 25 percent improvement in retention with interactive courses.”

- Miller, R. L, *Learning Benefits of Interactive Technologies*, Multimedia and Videodisc Monitor, February 1990, pg. 14.

“Increased Retention of information and its application to the job averages an increase of 25 percent over traditional methods”

- J.D. Fletcher (Multimedia Review, Spring 1991, pp 33-42).

“The average content retention rate for an instructor-led class is only 58%, the more intensive e-learning experience enhanced the retention rate by 25-60%.”

- Report titled “Corporate E-Learning: Exploring a New Frontier,” by WR Hambrecht + Co. reporting on a Techlearn '99 presentation by Ken Dychtwald.

Millbank studied the effectiveness of a mix of audio plus video in corporate training. When he introduced real-time interactivity, the retention rate of the trainees was raised from about 20 percent (using ordinary classroom methods) to about 75 percent.

- Millbank, G. 1994. *Writing multimedia training with integrated simulation*. Paper presented at the Writers' Retreat on Interactive Technology and Equipment. Vancouver, BC: The University of British Columbia Continuing Studies. p. 75)

Studies of major companies comparing technology-based training to classroom instruction show that learning gains were up to 56 percent greater, "consistency of learning" (variance in learning across learners) was 50 to 60 percent better, and "content retention" was 25 to 50 percent higher.

For example, a major **Transportation company**: reported an increase in bottom-line performance (on time delivery of goods) of over 35% which equated to millions in increased revenues and savings, learners showed 40% increase in learning retention and improved attitudes about management jobs, new company-wide processes implemented

12 months earlier than possible with traditional training. A **Military organization** found an increase in ability of personnel to correctly diagnose and repair aircraft systems the "first time" by more than 80%.

- *ROI With Blended E-Learning*, White Paper Report, <http://www.mentergy.com/blended/roi.html>, 2001.

Speed of Work

“In 1999, the average person received more information on a daily basis than the average person received in a life time in 1900.”

- Wetmore, D., *Time's a Wastin'* Training and Development Magazine, ASTD September, 2000, pg. 67.

“Half of what is known today was not known 10 years ago. The amount of knowledge in the world has doubled in the past 10 years and is said to be doubling every 18 months.”

- Wetmore, D., *Time's a Wastin'* Training and Development Magazine, ASTD September, 2000, pg. 67.

Half-Life of Knowledge

Andrew Sadler, vice president of strategy and alliances for IBM Corp.'s Mindspan Solutions. “The half-life of knowledge is decreasing, It's a matter of maybe three years in most professions and is down to months in the information technology field. The time pressures are only accelerating.”

- Schultz, J. *Effective, Inexpensive E-Learning Expands*, 06/25/02 Washington Technology http://www.washingtontechnology.com/news/1_1/daily_news/16728-1.html

The current half-life of most learning being between 8 and 36 months (less than 6 months for Internet-based technologies and highly competitive industries.)

- Kapp, K. M., *Integrated Learning for ERP Success: A Learning Requirements Planning Approach*, St. Lucie Press, Boca Raton, FL. 2001, pg. 270.

Technology is evolving so rapidly that the half-life of knowledge in many domains is measured in months.

- Andrew A. Sorensen, President, The University of Alabama

Does on-line learning take longer than classroom instruction?

No, in fact, studies indicate that the same subject can be covered in an on-line environment in 40 to 60 percent less time than in a traditional classroom environment. This is because the common distractions of breaks, student interruptions, and administrative details do not need to be attended to in an on-line environment.