Advantages of Technology-Based Training Over Instructor-Led Training

I’d bet if you polled 1000 lawyers from firms of every description, size and practice orientation, and asked them what was the optimal training approach, most would cite some version of face-to-face, instructor-led training. Before conducting this research, I would have agreed with them. After all, for 18 years I trained and coached lawyers one-on-one.

Unfortunately for those of us who held that belief, the objective data tells us exactly the opposite, i.e., that instructor-led training (ILT) is inferior to technology-based training (TBT) according to every metric in existence. Most of us would probably assume that TBT has a cost advantage. That’s true, and it’s huge, but it’s also superior in every other way that training is evaluated.

Throughout the world, technology-based training is changing the way corporations and individuals obtain skills in almost every segment of the business process. Initially, IT training dominated the TBT market. Now, however, front office, management, sales, customer service and professional development training are increasing at a rapid rate.

Definitions

**Technology Based Training** (TBT) is a computer-based training methodology that includes web-based, intranet-based, DVD- and CD-based training on any topic.

**Instructor-Led Training** (ILT) is the practice of training and learning material between an instructor and learners, either individuals or groups. Instructors can also be referred to as *facilitators* who may be knowledgeable and experienced in the learning material, or may be selected more for their facilitation skills and ability to deliver material to learners.

**Learning Objects:** TBT breaks course material into small bites by breaking large blocks of content into modules:
- can be searched and then completed in a short amount of time
- allows users to gain competency quickly
- enables users to brush up on a skill once they’re back on the job
- can quickly scan a course module list and find the lesson they need without wading through pages of unnecessary content.

**Instructional efficiency** means “gained knowledge or skills” divided by “all information delivered.” The percentage of the information delivered that leads to learning that improves performance. If only 15-minutes of a one-hour class is relevant, the class was 25% efficient because the learner had to sit through 45 minutes of unnecessary material. If an e-learner is able to skip 45 minutes of material, allowing them to focus exclusively on the 15 minutes of new material, the efficiency of the online class would equal 100%. It is this efficiency that gives e-learning the 2:1 time advantage it enjoys over instructor-led training, according to Brandon Hall. In general, a learner will need half the time to cover the same material in an online class as they would in an instructor-led class.

**Learning Velocity/Instructional Speed** refers to how quickly a program can be developed and delivered across an organization, timeliness, consistency, and ease of updating material.

**Learner opportunity costs:** This is the cost to an organization when learners are away from their jobs.
Top Technology-Based Training (TBT) Benefits:

**Enhances retention rate by 25 – 60%**

Educators agree that a lack of student interaction is a leading contributor to the failure of the standard classroom and textbook-oriented learning environment. TBT captures the student’s attention, and keeps it with a high level of interaction. Through rich multimedia, TBT courses are designed to gain and maintain interest through the extensive use of video, graphics and animation to illustrate and explain concepts, and by ensuring there is a high degree of interactivity with the student. Studies have shown that the more senses involved in learning, the higher the retention rate.

Whereas the average content retention rate for an instructor-led class is only 58%, the more intensive TBT experience enhances the retention rate by 25 – 60%. Higher retention of the material puts a higher value on every dollar spent on training.

**Provides for self-reinforcement**

Interactivity improves the retention of the skills being taught and simulations help walk you through actual scenarios and identify mistakes when you make them. Lawyers learn by doing (which is how they learn to practice law.)

**Faster learning rate**

TBT leads to a faster learning curve compared to instructor-led training. Delivering content in smaller units, called “learning objects” contributes further to saving time and has a more lasting learning effect (see Learning Objects definition). Since learners can customize the learning material to their own needs, they have more control over their learning process and can better understand the material, leading to a 60% faster learning curve, compared to instructor-led training.

**Greater “learning velocity”**

Instructor-led training requires more time to implement than e-learning because training must occur at a specific location or locations, at specific times. This may require travel time. Also, the number of participants is limited to room size or the appropriate number of students for a given training session. With TBT, courses can take place with any number of participants, worldwide, on any computer, at any time of day, including non-work hours. *This is especially important in a time-based economy such as law.*

**Content always current**

TBT has the ability to keep fast-changing content current, dynamic, and refreshed, unlike books or instructor-led programs that feature physical materials such as workbooks, exercises, etc. Adaptable to market and technological changes.

**Timeliness**

Instructor-led training must have a schedule which coordinates the time of the instructor, the learner, the facility on a specific date. TBT doesn’t require this coordination; it can be delivered whenever it’s convenient for the learner.

**Online training is less intimidating than instructor-led courses**
Students taking an online course enter a risk-free environment in which they can try new things and make mistakes without exposing themselves. This characteristic is particularly valuable when trying to learn soft skills, such as leadership and decision-making. A good learning program shows the consequences of students’ actions and where/why they went wrong. After a failure, students can go back and try again. This type of learning experience eliminates the embarrassment of failure in front of a group.

TBT interactivity accommodates different learning styles and fosters learning by hands-on training through realistic simulations and role playing. Learners “do what they are learning.”

Consistent learning experience
TBT courses are delivered consistently each time and for each participant, unlike instructor-led training, which has a risk of different messages or different interpretations of the content being delivered by the different instructors. TBT consistently conveys the same messages and emphases.

Anyone who has watched the same theatrical production by different casts in different cities understands that, even though the dialog, music, and choreography are nominally identical, those productions are noticeably different from each other due to the personal influences of local directors and performers. Each is a different show.

Saves money:
TBT is up to 90% less expensive than instructor led training.

ILT cost factors include course development, instructor time, instructor salaries, preparation time, classroom/conference room costs, travel expenses, material costs, and employees’ time. Prep times include setting-up the room and getting materials ready for the class. Post-class activities include clean-up of the room and reviewing participant evaluations.

An e-learning course does not require prep time or post-class activity. No “learner opportunity costs.” On average, an e-learner can cover an hour of classroom material in a half-hour online. Because e-learning usually occurs at the employee’s desk or home, there is little or no interference time before and after class.

TBT has none of the ILT cost burdens except development. However, because TBT is scalable, i.e., can be made available to an infinite number of learners at no additional unit cost, development costs are amortized over tens- or hundreds of thousands of learners, not dozens.

Learn from the best
Because learning occurs over the Internet, you don’t need to travel to learn from proven leading experts, or be constrained by their limited availability. You’re not limited to the expertise you can hire locally, or pay to have experts travel to your students.

Access
Students can learn anywhere, anytime via 24/7 global Internet access. Students train according to their own preferences, learning pace. Eliminates time- and geographic constraints.

Flexible
Students can navigate through the training to cover topics in whatever order is most beneficial in light of their specific training needs. This allows students to select topics, or to be directed to content that meets their level of knowledge, interest and what they need to know to perform
more effectively in their particular activity. TBT also enables just-in-time training, or reinforcement for immediate real-world challenges or opportunities. Students learn at their own pace, further increasing skill retention. They’re not constrained by an instructor-led class that’s too fast or too slow.

**Measurable**

With TBT, you can evaluate acquired knowledge throughout the course with embedded testing or, in the case of scenario-based simulations, continuously as they progress.

**More timely**

Enables “just-in-time learning” for quick solutions to required needs as opposed to “just in case” learning, which often does not improve performance.

<table>
<thead>
<tr>
<th></th>
<th>Instructor-Led Training (ILT)</th>
<th>Technology-Based Training (TBT)</th>
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</thead>
<tbody>
<tr>
<td>Content retention</td>
<td>+20%</td>
<td>+75%</td>
</tr>
<tr>
<td>Learning gain</td>
<td>-56%</td>
<td>+56%</td>
</tr>
<tr>
<td>Consistency</td>
<td>low</td>
<td>+60%</td>
</tr>
<tr>
<td>Training time req’d</td>
<td>100% higher</td>
<td>50% lower</td>
</tr>
<tr>
<td>Interactivity</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>Cost</td>
<td>10 times higher</td>
<td>90% lower</td>
</tr>
<tr>
<td>Logistics</td>
<td>Assemble group @ same time, place Travel, lodging, scheduling</td>
<td>One, or one million Anytime, anywhere Nothing to organize</td>
</tr>
<tr>
<td>Availability, scalability</td>
<td>Limited number of lawyers can train simultaneously</td>
<td>Infinite number of lawyers can train simultaneously</td>
</tr>
<tr>
<td>Measurability</td>
<td>anecdotal</td>
<td>precise, constant</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Variable, depends on instructor</td>
<td>By design</td>
</tr>
<tr>
<td>Learning experience</td>
<td>too much, too little</td>
<td>just in time, just enough</td>
</tr>
<tr>
<td></td>
<td>instructor’s schedule (learners must wait for training)</td>
<td>learner’s schedule, anytime</td>
</tr>
<tr>
<td></td>
<td>instructor’s pace (slower learners may not be able to keep up; quicker learners become bored and disengage)</td>
<td>learner’s pace</td>
</tr>
<tr>
<td></td>
<td>instructor chooses topic</td>
<td>learner chooses topic</td>
</tr>
<tr>
<td></td>
<td>real-time, only available now</td>
<td>revisit, review anytime</td>
</tr>
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</table>
Quotes from Corporate Users and Learning Experts

A branch of the US military estimated that their technicians’ ability to troubleshoot problems increased by 90% after the adoption of multimedia training, and found an increase in ability of personnel to correctly diagnose and repair aircraft systems by more than 80%.

Jerram: “Who’s Using Multimedia?”

When real-time interactivity was introduced, the retention rate of the trainees was raised from about 20 percent (using ordinary classroom methods) to about 75%.

Millbank, G., “Writing Multimedia Training with Integrated Simulation”

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”

Technology-Based Training produced a 60% faster learning curve as compared to traditional instruction.

Adams, Gregory L., “Why Interactive?”

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


Office Depot used a virtual classroom to simultaneously train students in FL, CA and TX, 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”

A major consultancy firm developed and delivered computer-based training for 7,000 consultants in 50 countries. The cost of the training was $106 per student, versus and estimated $760 per student for instructor-led delivery. Over the five-year lifespan of the program, technology-based training saved the firm more than $4.5 million.

A major transportation company reported an increase in bottom-line performance 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.

Hall, B., editor of “Multimedia & Internet-Based Training Newsletter”

What I hear, I forget; what I see, I remember; but what I do, I understand.

Confucius, 451 BC

“Flexibility, Accessibility, Convenience – Users can proceed through a training program ‘at their own pace and at their own place.’ They can also access the training at any time, and only as much as they need – known as ‘Just in time and just enough’.”

White Paper: Is Web-Based Training Right for You?

“The new economy puts a premium on intellectual capital. However, the life of knowledge and human skills today is shorter than ever, increasing the pressure to remain at the forefront of education and training throughout a career. In the midst of globalization and technological
revolution, four-year degrees are just the beginning of a forty-year continuing education. Lifelong learning may be considered a buzzword today, but it is quickly becoming an imperative.”

WR HAMBRECHT + Co

“TBT is simply the most intelligent way to accomplish the following goals:
- to improve current performance at work
- to advance career and/or increase salary by learning new skills
- to stay current with industry standards
- self-improvement such as motivation and social skills”

Corey O’Neil, Serebra Learning Corporation

"If you are not being educated in your job today, you may be out of a job tomorrow... Employee education is not growing 100 percent faster than academia, but 100 times - or 10,000 percent - faster... Over the next few decades the private sector will eclipse the public sector and become the major institution responsible for learning.”

Jim Botkin and Stan Davis, The Monster Under the Bed

“Education is the next industrial era institution to go through a complete overhaul, starting in earnest in 2000. The driving force here is not so much concern with enlightening young minds as economics. In an information age, the age of the knowledge worker, nothing matters as much as the worker’s brain.”

Peter Schwartz, Wired Magazine, The Long Boom

“Instruction-led training is very expensive. You have to pay for the printed material, the speakers, lodging, food, and travel. But with web-based content we’re able to reach people at their desks. We’re saving hundreds of thousands of dollars on travel alone.” (Software company)

Forrester Research – Online Training Needs a New Course

“Studies have indicated that retention of certain subject matter may be up to 250% greater with computer-based or on-line training than classroom based model.”

Merrill Lynch, The Book of Knowledge

“E-Learning tends to be short, targeted, task-driven, and episodic, while classroom learning tends to be longer, less well-targeted, and programmatic.”

E-Learning, Marc J. Rosenberg

References:


The Advantages of eLearning

By Karen L. Jones

Technology has revolutionized business; now it must revolutionize learning. In the 21st century, people have to learn more than ever before. Especially for global organizations, live classroom-based training is becoming too costly and cumbersome. Even if employees had the time to attend all the courses and seminars and to read all the books and reports they should to remain up-to-date in their area of work, the cost of such learning would be prohibitive. The need to transform how organizations learn points to a more modern, efficient, and flexible alternative: eLearning. The mission of corporate eLearning is to supply the workforce with an up-to-date and cost-effective program that yields motivated, skilled, and loyal knowledge workers.
Anywhere, anytime, anyone.

The growth of the World Wide Web, high-capacity corporate networks, and high-speed desktop computers make learning available to people 24 hours a day, seven days a week around the globe. This enables businesses to distribute training to multiple locations easily and conveniently. Employees can then access training when it is convenient for them, at home or in the office.

**Substantial cost savings due to elimination of travel expenses.**

When delivered through technology-based solutions, training is less expensive per end user due to scalable distribution and the elimination of high salaries for trainers and consultants. The biggest benefit of eLearning, however, is that it eliminates the expense and inconvenience of getting the instructor and students in the same place. According to *Training Magazine*, corporations save between 50-70% when replacing instructor-led training with electronic content delivery. Opting for eLearning also means that courses can be pared into shorter sessions and spread out over several days or weeks so that the business would not lose an employee for entire days at a time. Workers can also improve productivity and use their own time more efficiently, as they no longer need to travel or fight rush-hour traffic to get to a class.

**Just-in-time access to timely information.**

Information can be retrieved just before it is required, rather than being learned once in a classroom and subsequently forgotten. *Training Magazine* reported that technology-based training has proven to have a 50-60% better consistency of learning than traditional classroom learning (c-learning).

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**Higher retention of content through personalized learning.**

Technology-based solutions allow more room for individual differences in learning styles. They also provide a high level of simulation that can be tailored to the learner's level of proficiency.

With 24 x 7 access, people can learn at their own pace and review course material as often as needed. Since they can customize the learning material to their own needs, students have more control over their learning process and can better understand the material, leading to a 60% faster learning curve, compared to instructor-led training.

The delivery of content in smaller units, called "chunks," contributes further to a more lasting learning effect. Whereas the average content retention rate for an instructor-led class is only 58%, the more intensive eLearning experience enhances the retention rate by 25 - 60%. Higher retention of the material puts a higher value on every dollar spent on training.

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program shows the consequences of students' actions and here/why they went wrong. After a failure, students can go back and try again. This type of learning experience eliminates the embarrassment of failure in front of a group.

[O'Horo note: Dr. Larry Richard’s writings about lawyer psychology and personalities shows that lawyers have a powerful aversion to being wrong publicly. The low-risk nature of TBT is particularly significant for this population.]

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