

Chapter 1

Tactical and Strategic Advantages

The concept of Web-based training has attained something of cult status in the popular media. It is hard to pick up a training magazine or a professional newsletter or attend a conference without finding the lion's share of attention being given to Web-based training. Leaders in the field and studies suggest that Web-based training will be central to the design and delivery of workplace learning in the 21st Century. Recent industry reports, such as *Training* magazine's Annual Industry Report state that 13 percent of all courses are delivered by computer; and, according to International Data Corp (IDC), the online training market is estimated to reach \$11.6 billion in 2003.

Web-based training is advocated as an enterprise-wide training solution because all members of an organization can access it and because it can fill almost any gap in skills and knowledge. Online learning is a mission-critical application that helps organizations compete in the new economy. It has also been heralded as reducing training costs, improving return-on-investment, and delivering just-in-time training. Although these are often overstated, it is still clear that WBT is indeed a powerful tool.

Before advocating that your organization invest in Web-based training, it will be helpful to understand the advantages in a business context.

Tactical and strategic issues related to WBT are important to human resource managers, and training managers must understand these business themes in order to build a case for implementing Web-based training. It is imperative to be able to describe the value of WBT to an organization in terms of cost and benefits when talking to senior level managers and decision makers.

What You Will Learn in This Chapter

After completing this chapter you will be able to

- Assess the tactical and strategic benefits of Web-based training; and
- Determine whether or not Web-based training is the appropriate method for your program.

When to Use WBT

Strategic Reasons

There is a great deal of marketing hype regarding the *strategic advantages* of Web-based training. The term *strategic* comes from the military. In the military, leaders have a vision as to the general direction of the war and regarding what to attack and what to defend. This broad vision is called a strategy, and the adjective “strategic” is applied to those things relating to the overall direction of the endeavor or enterprise.

Web-based training is strategic only when it is used in support of broad goals having long-term significance. *Strategic reasons* for implementing Web-based training include:

Developing a Global Workforce. Web-based training is an excellent tool for developing a global workforce. The Web delivers consistent, timely, and quality training to staff members around the world.

Responding to Shorter Product Development Cycles. Web-based training is a powerful tool when dealing with short development cycles. In the past a new product would be released every twelve or eighteen months. Today organizations release new products or point releases of software every six to eight months. This rapid pace of development demands a training solution that can keep pace. Web-based training can be used to provide the needed training without taking employees away from their jobs.

Tactical and Strategic Advantages

7

Managing Flat Organizations. The downsized and flatter organizations are part of a lean and competitive landscape. This trend has placed the responsibility of training on line managers, who already have too much to do. Web-based training can deliver foundation skills, such as desktop application training and product training. This frees up managers, allowing them to focus on mentoring and coaching or on more advanced skills and knowledge.

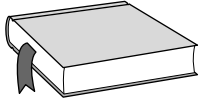
Adjusting to Needs of Employees. The recent labor shortages and changing trends in the workplace have led to telecommuting, virtual offices, and flex-time. These trends make it possible for organizations to recruit and retain workers more easily. These same workers benefit from a training delivery methodology that can adjust to their hours and work styles.

Enabling a Contingent Workforce. Contingent workers, such as temporary workers, self-employed workers, and consultants, increased by 57 percent between 1980 and 1994. Given organizations' growing reliance on a contingent workforce to deal with peak demands for labor, Web-based training can provide a way to quickly train these people.

Retaining Valued Workers. Education is a core benefit for employees who understand that training, retraining, job hopping, and even career hopping are part of the new economy. Web-based training programs that offer college degrees, technical certification, and skill-building courses are powerful benefits organizations can use to retain workers.

Increasing Productivity and Profitability. E-learning programs can increase skills and knowledge, making it possible for employees to sell more products, service a wider range of products, take on more complex assignments, and complete work faster and with few errors. All of these outcomes improve productivity and in turn increase profitability.

The strategic benefits of Web-based training are often overlooked for the more tactical benefits. Understanding your organization's strategic mission and the vision for moving the business forward is essential. Web-based training is expensive and requires the commitment of a cross-functional team. It is far easier to gain this commitment for a Web-based training program that is aligned with strategic goals.



A call center manager talks about initiating an e-learning program for tactical reasons and achieving strategic results

When we started, we knew what we wanted to accomplish, and we had a good business case for implementing Web-based training. The call center trained about one hundred new customer service representatives every quarter using an eleven-week face-to-face program. The Web-based training program reduced the new hire training time from eleven weeks to nine. The saving resulting from reducing class time and getting new hires on the phones sooner meant that the Web-based training system paid for itself the first year. As we forecast, Web-based training reduced our training costs.

What surprised us was the performance improvement. After completing the Web-based training program, new hires were able to sell 80 to 110 percent as well as customer service representatives who had been on the job a year.

Tactical Reasons

Tactical benefits are often easier to understand, and they tend to generate more enthusiasm because of the anticipated savings. These benefits meet important short-term needs, but they are less significant in achieving long-term goals.

Tactical reasons for implementing Web-based training include:

Reducing Travel and Related Costs. One of the easiest ways to show cost savings is to calculate the savings related to airfare, hotels, meals, and other travel expenses over a two- or three-year period. Keep in mind, this is simply a cost-savings tactic.

Enabling Learning Any Time and Any Place. Web-based training technically can make it possible for learners to complete programs at their desks, at home, or during slow periods.

Providing Just-in-Time Learning. If training programs are available on the Web, the learners can take training just before they need the content rather than enrolling in a class weeks before they *might* need the training. It is also easy for learners to return to the program for a refresher course.

Leveraging Existing Infrastructure. Organizations often seek to justify their investments in intranets, remote dial in access, new multimedia PCs, and other technology. Web-based training makes use of the existing equipment and staff, thus providing greater reason to adopt it as a training solution.

Tactical and Strategic Advantages

Enabling Delivery Independent of a Platform. Unlike older computer-based training technologies, Web-based training program can run on PCs, Macintoshes, and UNIX systems. Using Web-based training allows the training organization to create a program once and use that same program on all systems.

Providing Tools for Tracking and Record Keeping. Organizations that are required to keep records for government or insurance reasons are able to track student participation and completion. Some Web-based training programs offer powerful tools that use databases to keep accurate records and allow for succession planning and workforce development.

Making Updates Easy. Web-based training courses are easier to update than traditional computer-based training programs developed for delivery via CD-ROMs because changes do not require the pressing and shipping of new disks each time a module is updated. These reasons are summarized in Table 1.1.

A quick scan and analysis of the success stories featured in trade publications, such as *Training*, *Online Learning*, *InternetWorld*, and *e-Learning* magazine highlight two findings. First, most organizations initially justify Web-based training based on simple cost reductions or cost avoidance rationale. Analysts suggest that cost reduction may be the primary rationale because it is easy to demonstrate and defend. A second finding of equal interest is the fact that strategic benefits such

Table 1.1. Strategic and Tactical Advantages of WBT

Strategic	Tactical
Developing a global workforce	Reducing travel and related costs
Responding to shorter product development cycles	Enabling learning any time and any place
Managing flat organizations	Providing just-in-time learning
Adjusting to needs of employees	Leveraging existing infrastructure
Enabling a contingent workforce	Enabling delivery independent of a platform
Increasing productivity and profitability	Providing tools for tracking and record keeping
Retaining valued workers	Making updates easy

as improved productivity and increased profitability are often discovered after a Web-based training program has been conducted, rather than being the reason for running the program. In an Eduventures.com report, *Corporate E-Learning ROI Scoreboard*, Yegin Chin was unable to find any companies that were able to demonstrate measurable revenues directly related to an e-learning solution. In the best cases, organizations showed net benefits but not true ROI because they were not able to account for direct and indirect costs.

The Disadvantages of WBT

The business reasons for adopting Web-based training are easy to understand. It is also important to understand the disadvantages, as these may not be as obvious.

Substantial Technical Infrastructure

A clear disadvantage of Web-based training is the substantial technical infrastructure required to run programs. In addition to developing educationally effective training programs, designers must contend with computer system requirements, network capacity, and network access.

Generally, Web-based training programs can be used from a variety of platforms such as UNIX work stations, IBM personal computers and clones, and Macintosh computers. Of course, this may not be true if developers use highly complex tools. Even ubiquitous Web browsers such as Netscape Navigator® and Microsoft's Internet Explorer® present subtle differences in how they display a page of text or a graphic.

Other technical infrastructure issues are network capacity and access. Training programs compete with other applications such as e-mail. Unlike workbooks that stand on their own, Web-based programs require access to the organization's network.

Yet another issue is network access. Learners must be able to log in to an intranet or the Internet. Programs are limited by the kind of dial-in connections available. If learners are using a 28.8 modem, they may not have the capacity to download large files quickly. If learners are accessing the Internet from a corporate network, they may encounter security problems that prevent them from running Java code or downloading plug-ins.

New Learning Methods

Workbooks, videocassette programs, and job aids are familiar tools, but Web-based training is new for many learners. It requires learners to master using a browser, navigating nonlinear programs, and interacting with classmates using unfamiliar tools such as chat rooms and threaded discussions.

Tactical and Strategic Advantages

11

Required Range of Skills

Web-based training is labor-intensive, requiring broad-range skills. Because resources are frequently in short supply, trainers have become adept at playing multiple roles, but Web-based training should not be designed, developed, and delivered by a single person. The team should include graphic designers, network managers, server installers, end-user support personnel, and programmers. Managing a cross-functional team requires the coordination of schedules to accomplish project milestones in parallel. As the training group writes the program, the customer-support group may be talking with potential learners to determine whether they have sufficient RAM and a current version of the browser software.

Management of External Resources

Another disadvantage of Web-based training is that it relies on external resources such as other organizations' websites, adequate hardware, and reliable access to the network. One is at the mercy of others. An external website can be eliminated, leaving a hole in the program. Or a department may have no other use for sound cards, and so not have them installed. The trainer is also dependent on the information systems (IS) group to support end users and to keep the network running nights and weekends.

Figure 1.1 summarizes the disadvantages of Web-based training.

New Ways of Thinking

Organizations must learn to think about training as something that happens in places other than training centers and offsite programs. There is a tendency to think of Web-based training as something less than "real training." Managers feel that it is less than real training because workers are sitting at their desks and appear to be

Figure 1.1. Disadvantages of Using WBT

- ✓ Requires substantial technical infrastructure
- ✓ Requires learners to adapt to new learning methods
- ✓ Requires a team to design, develop, and deploy
- ✓ Requires management of resources beyond the training organization
- ✓ Requires organization to embrace new ways of thinking
- ✓ Requires significant time and money

surfing or not doing anything. This attitude leads managers and peers to regard workers engaged in Web-based training as being interruptible with questions, phone calls, and casual conversations. This attitude can make WBT a difficult learning solution to implement unless organizations begin to think about WBT as real training and important enough to give workers time to focus on the course.

In organizations such as IBM, attitudes are being changed using a number of strategies. The first strategy is formal accountability. At IBM, a management development program called Basic Blue is a required program of all first-line managers. This program is 75 percent online learning and 25 percent traditional classroom learning. The learners and their managers are accountable for successfully completing the online portion of the course. This accountability is part of a formal process that includes communication and rules regarding who can attend the traditional classroom portion. If learners fail to complete the Web-based training program or have difficulty with segments of the program, their managers and training professionals provide mentoring and support. Permission to travel and participate in the face-to-face class is also determined by successful completion of the online course. A second tactic is to make it clear that e-learning is a valued training method for both exempt and nonexempt employees. One clear indicator of the value of e-learning at IBM is the fact that five thousand managers worldwide enroll and complete the program. These managers are not only setting an example for other employees but they are learning first-hand about the value of e-learning.

Significant Time and Money

Web-based training requires more time to design and develop than instructor-led courses or self-paced workbooks. The act of creating Web-based training is similar to the act of creating software. This means that training professionals are required to take extra steps to program and test their courses. These extra steps add to the cost and extend the development time.

Now that we've looked at both the potential advantages and disadvantages of incorporating Web-based training into your organization, let's look at where it can best fit into your training strategy, what skills it best teaches, and the potential challenges of this training medium.

When to Use WBT

Web-based training is not the solution for every training problem, but it is appropriate for teaching certain skills and imparting particular kinds of knowledge, such as software applications, management skills, or business writing. The medium can

Tactical and Strategic Advantages

also be highly effective to teach learners the skills needed to close a sale, diagnose a problem, or evaluate the merits of competing solutions. Table 1.2 shows a matrix for determining when to use WBT.

Gap in Learners' Skills and Knowledge

Web-based training is a potential solution to a performance problem if the learners lack skills or knowledge. Like any training, it will not work if the performance problem is the result of factors other than lack of skill or knowledge.

Technically and theoretically, just about anything can be taught on the Web, but it can be impractical. Consider the following types of skills:

Cognitive Skills. Cognitive skills include solving problems, applying rules, and distinguishing among items. Tasks that require the manipulation of symbols and numbers are well-suited to being taught on the Web, such as completing an income tax form. Cognitive skills are traditionally taught using text, graphics, and symbols and such instructional strategies as reading, writing answers, solving computational problems, and completing exercises. All are well-suited to Web-based training.

Psychomotor Skills. Psychomotor skills require a complex combination of physical movement and thought, such as operating a crane or driving a golf ball. These skills are difficult to teach in a WBT program, as they require an environment with coaching and detailed feedback. Given adequate funding and time, however, it is possible to design such a program.

Table 1.2. When WBT Is Appropriate

Type of Learning	Well Suited for Pure e-Learning Solution	Best as Part of Blended Solution
Cognitive skills: Complete a tax form, balance a checkbook	X	
Psychomotor skills: Hit a golf ball, use a table saw		X
Attitudinal skills: Value diversity, choose to recycle		X

Attitudinal Skills. Teaching learners to change their opinions and, in turn, to change their behavior is challenging in any medium, but it is particularly challenging in Web-based training. For example, if the objective is to teach learners to care about the environment and, therefore, to choose to recycle, there is no opportunity to use reinforcement strategies available in the traditional classroom. The tools that allow trainers to develop simulations, conduct discussions, and facilitate group learning can be expensive and usually require that learners have access to powerful computers.

It is possible to teach psychomotor and attitudinal skills on the Web, but such programs are difficult to design and develop. I will discuss these types of learnings/skills in more detail in Chapter 6, *Selecting the Most Appropriate e-Learning Method*.

Adequate Computer Skills

The learners must have computer, browser, and Internet skills. Even learners with these skills must be carefully assessed, and the program must be matched to their skill level. Learners with novice-level computer skills do best in programs that simply run in the browser. Offer more technically advanced learners complex WBT programs with video and audio that require the downloading and installation of plug-in software.

Organization Has Capacity to Deliver

Organizations must have adequate hardware, software, and staff to support learners. Determine whether your organization has the technical infrastructure to connect to the Internet or the organization's intranet. Be sure that computers have sufficient memory and RAM; provide support staff to assist local and remote offices with network problems, hardware failures, and browser installation.

Some Potential Problems and Recommendations

Three important problem areas that you should be aware of when planning programs are discussed below. Other ideas on how best to implement Web-based training programs are discussed in the next chapter.

Inadequate Resources

Avoid Web-based training for psychomotor or attitudinal skills unless you have adequate resources. Designing Web-based training for complex psychomotor skills is expensive. Teaching them requires more than instructing learners to execute steps in a process; it requires opportunities for practice that bring together the mental and physical knowledge and skills required to act. A successful WBT program

Tactical and Strategic Advantages

requires high-quality simulations, two-way video for coaching, and a network that can handle a large volume of traffic. For example, it is technically possible to develop a WBT program to teach newly hired warehouse workers to drive a forklift, but it would require substantial programming, editing, network bandwidth, and computer resources. Before starting a project like this, develop a detailed cost estimate and compare it to alternative training options such as on-the-job training, one-on-one training sessions, or a mentoring program. Even if the program could be delivered on the Web, does it make sense? Even when teaching cognitive skills, not having the necessary resources can present difficulties.

Inadequate Materials

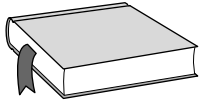
Avoid using existing materials for a Web-based training program without redesign. Although existing courses are a good starting point for material, they will require instructional, graphic, and technical redesign to take advantage of the Web. Existing materials such as student guides, computer-based training programs, and video-cassette programs were probably created with tools such as Microsoft's Word™ or PowerPoint™ and Macromedia's Director™ or Authorware™. If materials were created with these tools, it is relatively easy to convert them to a Web-ready format.

Lack of Variety

Avoid using the same software tool for every program. The four kinds of Web-based training methods will be covered in Chapter 6. Suffice it to say for now that it is not advisable to use a single software application or developmental tool to create all of your programs. Distinct software applications and tools are available for creating text-intensive learning, live instructional video, radio-like broadcast programs, and animation. Each of these offers wonderful training possibilities, but no single tool will be equally effective for solving all training problems. Use a combination.

Think of Web-based training within an overall training plan and as an additional method for delivering instruction, along with videotapes, CD-ROM, and workbooks.

Select the appropriate combination of media, one that is easy for learners to use and that delivers the learning objectives. In some cases it is appropriate to deliver the entire class via the Web. In others, it is more appropriate to use the Web to complement instructor-led classes, for example, as a prerequisite for videoconference training or as advanced training for those who have completed internships or apprenticeships. Learn the unique advantages of this medium, and then use it judiciously.



Training manager explains strategy for delivering customer training

Our customers are not big fans of e-learning; they want face-to-face classes where they can get to know the new product, talk to the guys who built it, and ask questions. These new release classes work great. The problem is keeping customers updated on changes in the product after the initial new release class. Sometimes we make changes to the product that require a half day of training to understand. We know that customers aren't going to travel all the way here for four hours, so we use e-learning for update training. The update training enables people to get what they need without the travel and to still be able to talk to the instructor and other students, and to ask questions.

Summary

Devoting the opening chapter of a book on Web-based training to business issues may seem odd, but it is essential that those responsible for corporate training start here. Web-based training is simply a delivery methodology and it is no better or worse than traditional classroom training, video-based training, or correspondence course training. Choosing to adopt online learning for a corporation is a business decision that rests on two factors: Is there a tactical and/or strategic benefit? and Can this delivery methodology do the job? The next chapter will move beyond the "go/no go" decision and look at best practices for implementing Web-based training.

Suggested Readings

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Tactical and Strategic Advantages

17

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