



E-Learning: Harnessing the Hype

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To E or not to E? That is *not* the question. E-learning is here to stay, like it or not. Therefore, our job as performance technology professionals is to support its effective use and implementation: we must “harness the hype” into a reality that delivers on its promise.

So, just what is this promise? And how will we be able to evaluate it? These are the questions that we need to address. The purpose of this article is to help define the promise, determine if it is real or empty, and present the factors that need to be in place to implement e-learning effectively.

Let’s start with the promise itself. The promise of e-learning is relatively straightforward. It centers learning around the student (the learner) instead of the teacher. It focuses on the strengths and needs of individual learners to make lifelong learning a practical reality. But where exactly does e-learning fit into the double landscape of both the “E” and the learning (“L”)? When all is said and done, we must be confident in understanding whether the focus is really on the E or on the L. Is it the media or the message that is most important?

Let’s face it, without the L, absolutely *no* learning occurs. So, are we spending too much time focusing on the E at the expense of the L?

Why E-Learning?

There are many theoretically good, and frequently documented, reasons for adopting an e-learning approach:

- Availability (it’s out there all the time)
- Affinity (it’s relatively close)
- Appeal (it’s inherently sexy and enticing)
- Affiliation (it’s inherently involving in that the learner must interact with it)
- Relevance (it’s useful for helping learn exactly what one wants to know)
- Reinforcement (it offers immediate feedback and an opportunity to track a learner’s progress)

- Reduced cost (it doesn't require travel, or as much time off the job)
- Reduced training time (it can reduce classroom time by as much as 50%)
- Retention (it can deliver twice the learning in half the time)

And it is no coincidence that many, if not all, of these factors happen to be closely aligned with solid adult learning principles: relevance, control, motivation, feedback, and recognition, as well as some basic efficiency factors around potentially reduced costs and time. Just what, then, does the E do that either enables, engages, or excites the learning environment? In theory it offers "anyone, anytime, anywhere" learning at the touch of a fingertip. In addition, it offers a shift in focus from event-based/teacher-centric to virtual-based learner-centric environments that are "pulled" by rather than "pushed" to the learner, and the potential for improved instruction, by focusing more on the student as the recipient than the teacher as the deliverer of knowledge.

So, what's the real business case for this e-stuff? Here are some e-factoids:

- An estimated 50% of all employees' skills will become outdated within 3 to 5 years (Moe & Blodgett, 2000).
- Skilled jobs, as a function of all jobs, have grown more than 300% in the last 50 years. In 1950, skilled jobs were 20% of all jobs. In 2000, 65% were skilled; by 2005, that figure is expected to hit 85% (Moe & Blodgett, 2000).
- Only 21% of American adults older than 25 have a bachelor's degree or better (Moe & Blodgett, 2000).
- In the United States, 1 out of 10 information technology jobs remains vacant because of insufficient skilled workers (Johnson, 1998).
- Average employee tenure has decreased from 5.2 years, only 18 months ago, to 3.6 years currently (Schuchman, 2000).

While these data do not necessarily make the case for e-learning, they do present a more serious scenario than we have faced in recent times. For example, with the relative shortening "half-life" of job skills, as well as the general skills shortage, there is an even greater need to bring people up to speed quickly and effectively so they can perform as knowledge workers both today and in the future. Perhaps

this relatively dire situation requires a new way of thinking about learning. Half the time, half the cost, learner centric, sounds like a winning formula, but does it work? Is it effective? This is the real question that must be addressed. If it doesn't deliver at least equal, if not enhanced learning and isn't effective, then perhaps this is the all-time hype of the training and education millennium.

As performance improvement professionals our focus should be much more on the L than on the E. Learning is the primary reason we're in this business. We are trying to help organizations and their workforces become more capable in performing their work. So it must be about the learning first and delivery second.

Is e-learning the panacea for all learning ills, the second coming of training and development, or is it the latest training and development fad, destined for the graveyard of great ideas that never reached their promise? If it is the former, then has it fully leveraged its potential, or are we just seeing the tip of the iceberg? If the latter, then why, how, and where has it failed so far? And, are these legitimate omens for the future?

The e-learning community would have us believe the former in that there are hundreds of e-learning providers ready to offer organizations an e-learning solution that meets their needs. You only have to attend any one of the industry's trade shows to confirm this.

As shown in Figures 1 and 2, the fact is that the e-learning business is growing. For example, three years ago at the annual conference of the American Society for Training and

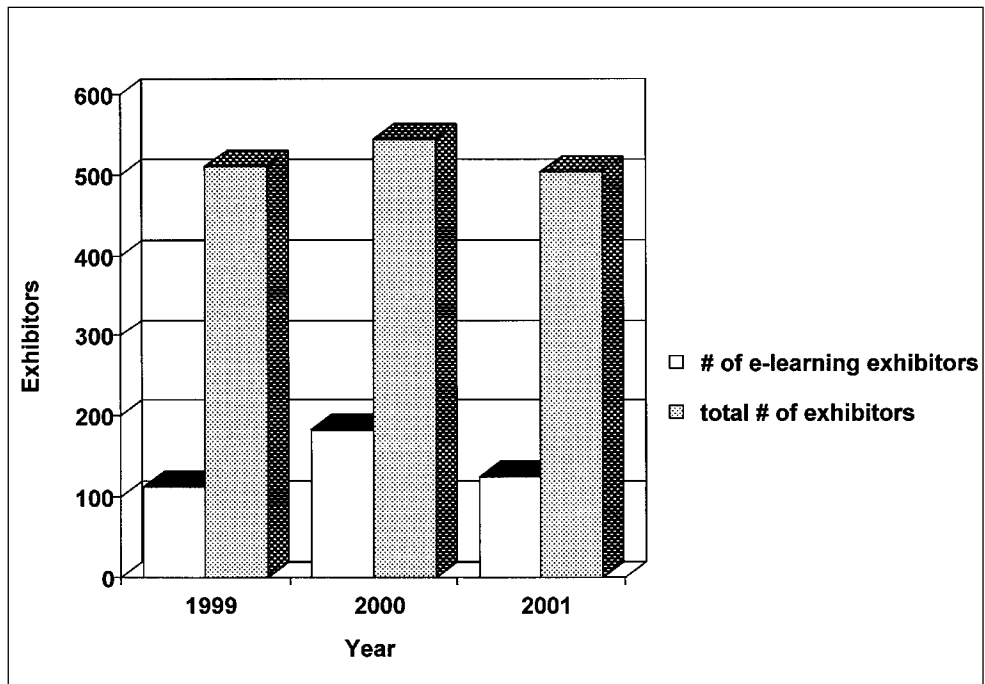


Figure 1. Number of Exhibitors at ASTD Conference.

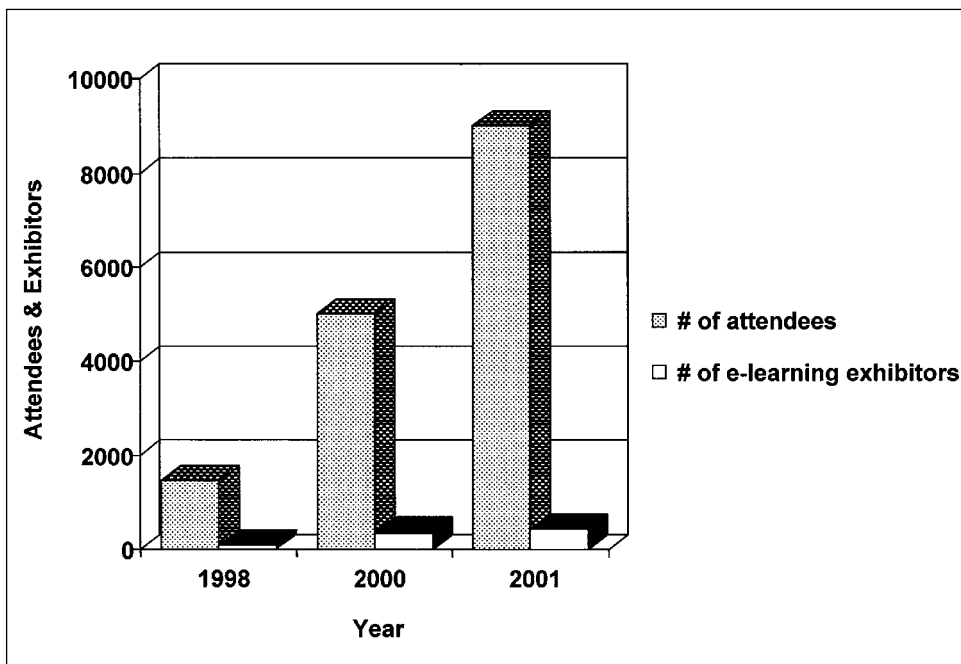


Figure 2. OLLO Conference Attendance.

Development, 112 of 510 exhibitors (22%) were classified as e-learning vendors. In 2000, there were 183 out of 544, or 34%. While the figures declined somewhat in 2001 to 125 and 503 (25%), respectively, this is still an increase over 1999. (L. Burr, personal communications, February 6, 2001, and August 7, 2001). Similarly, three years ago at the first On-Line Learning Organization Conference (Figure 2), there were 1450 attendees. In 2000, there were 5000 and in 2001 an estimated 9000. Three years ago at this conference, there were 77 online learning exhibitors. Last year there were 353, with an estimated 425 at the 2001 conference, more than a 350% increase in just four years (J. Noack, personal communication, August 10, 2001).

E-Learning as a Change Initiative

The impact of e-learning is bigger than simply making learning available to anyone, anywhere, anytime. This is not only a new way to learn, but may require a different culture to support a new learning organization: a culture depicted by a greater emphasis on, and support for, self-initiated development, collaborative learning, manager coaching, action learning, and retooled tracking and measuring systems. Adoption of an e-learning paradigm is likely to influence how people learn, forever. As such, one way to harness the potential hype is by addressing this phenomenon as a potentially serious change intervention.

This means first confronting reality by answering the question, “What is the current situation?” then asking ourselves, “What is the ideal future?” The gap between these answers

creates the business case for change. Once we’ve identified this gap, we will be in a position to “design the future” by determining just what has to be done to create a winning business proposition to close it and lead the change. Then, for example, to lead the change to a different learning paradigm in the organization, we must focus on how to mobilize and align the organization around this change. And finally, as we accelerate the transformation to a new or modified way of learning, we need to assess just what results we have obtained.

What, then, exactly is the current situation regarding e-learning? Here are some additional interesting and relatively up-to-date e-factoids that further define the current situation:

- Only 5 years ago, a 1996 *Training* magazine survey indicated that 82% of all organizations of more than 10,000 employees used some form of technology-delivered training, albeit almost all of it for technical knowledge and skills (Industry Report, 1996).
- A recent Forum Corporation survey of 144 U.S. companies found that the percentage of companies providing e-learning for all employees will double in the next 2 years (Online Learning, 2001).
- Students enrolled in distance education as a percentage of total post-secondary enrollments are projected to triple to almost 15% in 2002 (U.S. Dept. of Education, 2000).
- Corporate training budgets increased 23.5% between 1994 and 1999 (Cappelli, Wilson, & Husman, 2000).
- The education and training industry, including K-12, higher education, and corporate training, is estimated to be a \$815 billion industry (Capelli, Wilson, & Husman, 2000).
- The market for web-based corporate learning in the United States is expected to reach \$11.4 billion by 2003 and \$22 billion in 2005, up from \$550 million in 1998—a 40-fold increase within less than 5 years. Current e-learning “purchases” are estimated at \$1.1 billion (see Figure 3).
- Global e-learning is expected to grow to \$365 billion by 2003 (Moe & Blodgett, 2000).
- The federal government anticipates increasing its e-learning spending by approximately 25%, from \$200 million in 2000 to \$850 million in 2001 (Input forecasts, 2001).
- Both ASTD and the Corporate University Xchange expect classroom use in corporate training to drop from

the current level of 78% to 64% by the end of 2001 (Meister, 2000).

- Lakewood Publications, publisher of *Training* magazine, estimates that the \$1.14 billion spent on e-delivered training is only 2% of the \$63 billion spent on all of training last year, and thus has a lot of room to grow (Industry Report, 2000). Finally, 75% of e-learning described by *Training* magazine was in the content area of computer technology and programming skills. As of 1998 this accounted for only 6%–21% of all training, depending on the type of organization (Industry Report, 2000).

What can we make of all of this? First it looks as though people are relatively committed to this whole approach. At least they are putting their money where their mouth is. Perhaps more telling is the fact that it just appears to be in its infant stages. There seems to be a lot more room for the growth of the e-learning industry.

Again, “to E or not to E” doesn’t seem to be the most relevant question. The conversations we are hearing don’t seem to be about “Shall we do this?” but rather “How shall we do this?” It’s getting to the point where you have to justify why in the world you’d send people to any classroom.

But, there are still a few potential stumbling blocks that need to be addressed first during this journey to e-learning nirvana:

- People have to be trained in new skills to manage and deploy online learning systems in organizations.
- There are no standards for online learning development. Courses are being developed on vendors’ own proprietary systems, making it difficult if not impossible for organizations to adopt online courseware or

learning management systems from different suppliers. They simply don’t “talk” to each other very well.

- Business managers are taking a much more performance-oriented approach to online learning. They want to assess not only its potential for cost savings and bottom line results, but also whether it can deliver improved performance.
- Relatively limited bandwidth is still an issue. Downloading and video streaming problems abound.
- Pricing consistency issues abound as well, often at the expense of user friendliness. Is it licenses for corporate libraries? Number of courses taken? Time on line? All options are available in the marketplace, with different vendors dictating varied approaches, thus making it quite difficult and inconvenient to use more than one e-learning supplier within an organization.
- Technology platforms are numerous and varied in the infrastructures they support.
- Perhaps most important, there is little research on the impact or effectiveness of investments into e-learning initiatives.

So where does this leave us? Is e-learning a silver bullet or a white elephant? The jury appears to still be out, and it looks like good intentions may be ahead of the infrastructure reality. The real *promise* of e-learning is showing people how to access information if and when it is needed. It can teach you something you need to know, as well as help you determine what you don’t need to know. It can help you focus on what you need, when you need it.

But does this mean that classrooms, management schools, and university departments of the world will go out of business? Hardly! More e-factoids:

- After surveying more than 150 university students, a Gartner Group survey showed that the traditional classroom experience still is the highest rated. The report also found that training is moving on line not because it is better, but because it is cheaper and more measurable. This may offer the most pause for concern, as ultimately the effectiveness of the technology should be the only criteria of its value (Gartner Group, 2000) (see Figure 4).
- A recent study by DDI, a selection and training consulting firm, on leaders’ learning preferences concluded that they are only “moderately enthusiastic about computer-based learning.” It ranked sixth most preferred out of nine delivery methods (Wellins & Byham, 2001, p.101).

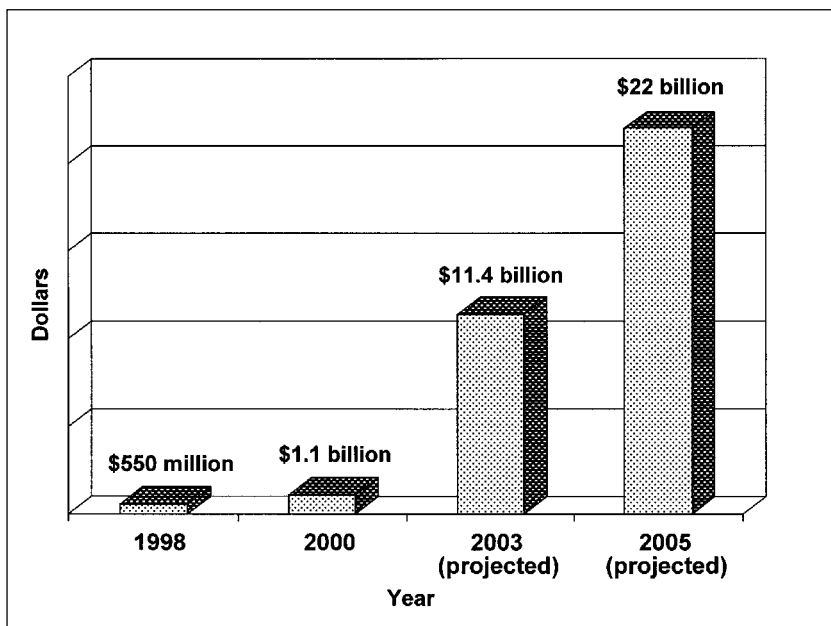


Figure 3. U.S. Market for Web-based Corporate Learning.

- Another study showed that, for new supervisors, preferences for e-learning were significantly affected by the specific subject matter, length of learning time required, and place of learning. That is, not everyone preferred e-learning all the time for all subjects. In fact, for certain subject matter, such as administrative forms and procedures, e-learning methods were much preferred over classroom training, while for other topics, such as leadership skills, classroom training was much preferred over e-learning (Cohen, Dove, & Bachelder, 2001).

	E-learning average rating	Instructor-based average rating
Business goals met	4.5	5.0
Learning occurred	5.5	6.5
Observable change in behavior	4.5	5.5
Cost-effectiveness of a course	9.0	4.0

Inside Technology Training, May 2000
Gartner Group

1= not effective
10= highly effective

Figure 4. Evaluations of E-Learning vs. Classroom Instruction.

- According to 2000 industry survey, 73% of training is still delivered in an instructor-led classroom, 13% by computer with no instructor, 9% led from a remote location with an instructor, and 5% via other methods. (*Industry Report*, 2000).
- And of the companies using their own intranets for training, only about 20% were using them for interpersonal skills, 15% for customer service, and about 15% for sales and marketing (*Industry Report*, 2000).

So while there is a strong trend toward the adoption of e-learning delivery systems, there are some indicators that it hasn't quite arrived yet. As one noted educational pundit was heard saying: "The whole point of the computer is to try to improve the nature of education, not to build modern-day correspondence courses" (Schanck, 2000, p. 66).

Caveat Emptor

So, is the pendulum swinging back a little? Is there a slight crack in the armor? What we're finding is that those early adopters, out there on the bleeding edge, have indeed begun to pull back a little, to start asking critical questions about e-learning's viability; questions about return on investment, learner preferences, learning time, and whether there are business performance results.

Granted, these are the same questions that have been and continue to be asked about all training. And, quite frankly, few of these questions can be answered with any reliable confirmation. Nonetheless, they still need to be asked and ultimately answered, particularly given the incredible costs of establishing new technological infrastructures, curriculum alterations, and cultural transformations required to make e-learning work. More e-factoids:

- Several hundred faculty members at the University of Washington signed petitions opposing state plans for an online university, maintaining they cannot reduce all education to the passive and solitary activity of staring at a screen (Dobbs, 2000).
- Even with online interactions, nearly 30% of the time the trainee still interacts with human instructors and other students (Parks, 2000). Thus, it appears that e-learning in and of itself cannot provide the total learning experience unless accompanied by some human interface.
- Seventy-five percent to 80% of people who start an e-learning course do not complete it, according to a 1997 American Management Association study (Zielinski, 2000).
- Ninety percent of all corporate and government training occurs on paid time, thus it is not surprising that people don't finish online courses they start (*Industry Report*, 1999).
- The American Management Association survey corroborated this by showing that of 1,000 people from 6 companies, 75% completed their e-courses during work hours, rather than outside of work or during lunch (Zielinski, 2000).

How do we reconcile these figures with managers' expectation that online training will allow learning to move out of the work day and into employees' own time? Does "anytime" really mean "after work"? Does "anywhere" really mean "at home"?

All this information boils down to a systemic implementation issue that may very well undermine the adoption of e-learning methods across organizations today; unless, of course, we create a different model.

A More Effective Approach

Despite the emerging e-learning drawbacks, organizations are changing their entire learning agendas to move into more and more e-learning environments. What is a different approach that will maximize the potential at the intersection of learning and technology? Perhaps the best examples that corporate America offers are the stories of companies, including Dell Computer, Cisco Systems, Johnson & Johnson, Motorola, Ford, Verizon and IBM, that have embraced e-learning.

The IBM example has been relatively well documented, but it is worth reiterating as a model for not only the future of e-learning but perhaps even the ideal future. And companies serious about their approach are lining up at IBM's door to learn about their "blended learning" approach, which includes significant online prework training on such items as practices, procedures, and policies, as well as some overall informational modeling. In this model, management tutors are assigned to each participant to help participants with any questions. Participants must pass mastery tests in the six-month period before attendance is permitted at a lab event (lasting less than a week). During labs participants apply and practice the information they have prestudied, particularly interaction-related skills. After this lab, the participants' managers are brought into the postlab learning experiences to coach their direct reports. The management tutor is also available for counsel, and additional online learning modules are provided for self-study (Lewis & Orton, 2000).

IBM has recognized that highly interactive skills require face-to-face learning, whereas informational and knowledge-based subject matter can be learned through an e-enabled learning environment. IBM is taking the best of both approaches and applying them appropriately.

It appears that taking the best of both the face-to-face and the virtual learning worlds will provide the most efficient and effective experience. This isn't necessarily a hedge: Remember, this blended proposition offers as much speculation as an e- or classroom-only approach. We literally do not know yet what will work the best (Zenger & Uehlein, 2001).

Regardless of the approach, and say that we lean toward a blended learning one, there is still the need to understand exactly what outcomes we want, both from the business and individual learner perspectives. This translates into what we want people to believe, know, or do differently than they did before the learning intervention took hold. Once we have defined this, we are in a better position to match the appropriate media with the intended message, enabling the outcome we want to achieve.

Laying the Groundwork

Once a winning business proposition has been created, what has to take place for effective implementation of e-

learning given both its incredible potential and possible liabilities? There are two huge transformational action steps that we need to take to leverage the change needed to get to the ideal e-learning future: assessing the real needs of the learner and the organization; and creating an e-learning strategy that meets the identified needs of the organization.

The needs assessment actually can be broken into three distinct areas, each of which is equally important. The first is to clearly determine and articulate the organization's overall business strategy. This means intimately understanding the organization's macro-level objectives. The second is to evaluate important system factors. This refers to identifying the main goals necessary to drive the business. These can be financial targets, customer satisfaction indices, quality and compliance standards, and so on. Third, we need to critically assess the target population's overall readiness for this intervention. As you might expect, there are several levels to this readiness from the user to the technology to the environment (Chapnick, 2000).

Once these needs have been thoroughly identified and evaluated, it becomes absolutely critical to develop a comprehensive e-learning strategy. This is the second, and largely forgotten, huge step required to get to the ideal future, forgotten because organizations get caught up in the "next next thing" syndrome, either insistent on being at the leading edge or equally scared of being left behind.

But neither motive is strategy driven. And those organizations that have jumped head-first into the e-learning world are slowly beginning to pull back as they more carefully assess first just how their business strategy should drive their overall learning agenda and then the methodologies that will work best to deliver on it.

Much of an e-learning strategy can be based on the results of the needs assessment. But in general, the strategic questions can be summarized around a number of critical issues: the technological infrastructure, the organizational learning culture, the requisite personal competencies of all stakeholders, individual learning preferences, and evaluation strategies.

But, above all, it can't be forgotten that this is as much a cultural intervention as any major organization change. Completing a serious culture *check* that identifies where an e-learning intervention can be supported by goals and delivery methods is absolutely critical to its effective implementation. Getting learners to embrace this type of change is crucial and doesn't happen automatically.

E-learning has value and can create very positive results when carefully selected as a means to achieve specific operating and performance objectives, and when it is appropriately adjusted to meet the needs of a particular organization. However, to the extent that e-learning can provide a power-

ful management tool, it also holds the potential for wreaking havoc and causing tremendous damage, especially when it is seen as a panacea for all the organization's learning ills. When applied blindly across a business, without attention to *where* it might be useful, *why* it would be appropriate, with *what* other techniques it would be combined with; and *how*, if at all, it should be modified to meet the needs of the organization, we simply would be creating a prescription for quick and surefire failure.

Where Is All of This Going?

First, we need to explore what really is driving the upsurge in e-learning. The fact that we could only attend classrooms in the past has contributed costs that were unavoidable. These have even included how to use technology courses that were vital for using the new tools of the trade. Now these courses are delivered on line; not surprisingly, they account for more than half (approximately 60%) of the content available on line (Industry Report, 2000). Additionally, the cost of delivering these courses has reduced dramatically. This has appeal for the balance sheets of any organization.

But, is e-learning a replacement for face to face? No! Is it something that can significantly enhance whatever face-to-face events are needed to ensure learning on the job? Absolutely! Are we there yet? Not by a long shot! E-learning should be used to complement instructor-led training, not replace it.

The truth is that we're going through a big change in the way we think about learning in general. It is vital to restructure our learning approach away from the exclusive, event-driven approach. The latter is too slow and clumsy given our fast-paced and ever-changing environment. Learning needs to be provided on an as-needed basis, not before or after the fact, and not necessarily outside the job context as are most current training interventions. And e-learning can take us a long way to that end. However, as noted earlier, there are many potential risks to successfully implementing an e-learning agenda. Four of these risks stand out; as they are potentially devastating to the long-term effectiveness of the e-learning movement, they warrant special mention.

Risks to Learning

Ineffective Content. The first of these potential risks refers to the *content* of the courseware, as many others have pointed out. Some content cannot be effectively or efficiently presented electronically; for example, psychomotor abilities, interpersonal skills, and attitudinal changes. The caveat to this statement is the cognitive, or knowledge, component of these topics. The content that is best suited for electronic delivery right now is cognitive content. Facts, figures, and concepts are all easily presented in this format based on solid instructional design principles.

At the end of the day, content may be king, but design is the queen without whom the king can't produce a thing. It is vital, of course, but what differentiates quality e-learning from "tabloid training" is process, not content. It is the L, not the E, that makes the real difference.

Inadequate Design. The second risk factor involves inadequate or inappropriate *design*, both instructional and graphic. Both must be compelling and engaging enough to keep the learner involved, interested, and stimulated. For example, e-learning programs must have the capability to understand a student's reasoning before they can offer feedback to incorrect answers. If this capability is missing, the downside of e-learning might well be loss of student motivation and reduced learning because of a lack of substantial intellectual interaction.

It does make one wonder about the value of the myriad of electronic, page-turning online courses that resemble nothing more than e-books. Technology, or any other delivery medium, should be a means to deliver effective learning, not an end in itself. Dazzling technology has no value unless it supports content that meets the needs of learners. Just because it sits on a website doesn't mean it's teaching anything. There are subjects that can be taught effectively electronically and subjects that cannot. That's why a blended approach makes the most sense.

The most critical issue we face as an industry is that the overwhelming attention being paid to the E component could end up over-riding the critical importance of the L component. The ideal future is a learning experience designed to be *memorable*, *motivational*, and *magical* if it is to make a lasting imprint on the capabilities of the learner. Getting to this point takes both a deep understanding of how people learn, why this particular learning is important to business results, and what learning methods and approaches will work best, given these particulars (Cohen, L'Allier, & Stewart, 1987).

Limited Technical Environment. The third major downside has to do with the *technical environment*: bandwidth, software, and hardware. If content still has to be accessed from 14K modems (or even 56K modems), there's a real limitation to what can be instructed successfully. Instructional design can get around some of those limitations, but they will still be present.

Many objections to e-learning can be addressed by real-time e-synchronous events, especially as a transition between what we have now and what will be in the future. But, then we concede the anytime, anywhere e-learning benefits. Obviously, technology has the potential to enable faster, cheaper, and even better learning, but it also presents a major risk for learning effectiveness if implemented poorly.

The real caveat for e-learning is that we could be too easily seduced by the technology and too willing to compromise pedagogical and human values to grab our share of the bleeding-edge toys. We expect the Internet to cut costs rather than add value, and we could convince ourselves to accept a drop in learning standards. In the process, we may actually spend too much money, waste too much time, alienate our learners, and damage our credibility.

Cultural Drawbacks. The fourth major risk is around the *learning culture*, both at an individual and organizational level. There are cultural drawbacks to e-learning that are common to many companies. These cultural drawbacks affect even well designed e-learning and outweigh many of the potential advantages that it can offer. Our concern is how e-learning's potential advantages could inappropriately translate into the daily work culture, such that "anytime" does indeed mean after work, and "anywhere" becomes at home.

One of the advantages of instructor-led training, of course, is that it is a scheduled event that removes learners from day-to-day distractions so they can concentrate on the intended learning. In most company cultures, e-learning lacks this key element. Actual course completion rates for online registration are relatively low, in the less than 50% range (U.S. News & World Report, 2001, pp.7-8). This is no big surprise, given the obstacles to completion. Not only must we establish the correct mindset in the learners if they are to be successful with e-learning; we also have to employ techniques for goal-setting, self-feedback, and honest self-assessment.

No doubt e-learning is going to become more prevalent in the future, creating competition for classroom learning and thus driving up the quality of both in the end. But, just as computers haven't created a paperless society, and just as shopping online has not replaced the experience of shopping in a mall, e-learning will never totally replace the classroom.

At the End of the Day...

For centuries we've been gathering in places to learn. E-learning has not and isn't likely to change this. However, e-learning is potentially faster, cheaper, and more convenient for the learner and has a bright future in selected areas of employee training, especially in the more technically oriented or hard-skill areas. The real question is, can it be more effective?

The real "net-net" of e-learning is that *technology should function as a tool for learning, not as the blueprint for the learning agenda*. One of its greatest strengths is its ability to accommodate a wide range of learning styles simultaneously.

Yet e-learning is not the panacea for all training ills, despite its tremendous potential. Nor does it fit the needs of all learn-

ers, all content, or all environmental factors. In many cases, a live scheduled classroom event may best fit the bill. This is why we should seriously consider an approach that incorporates both types of learning. Classroom instructors can capitalize on the true strengths of classroom learning, live face-to-face discussion, interactive exercises, and immediate feedback, and still use CD-ROMs, intranets, the Internet, digital groupware, and other electronic synchronous and asynchronous tools to provide learners with the basic information and concepts for effective on-the-job performance applications. In addition, trained virtual coaches, videoconferences, and online chat rooms can provide on-the-job follow-up, while Internet tools can be used for surveys, self-assessments, competency profiling, directories, and references.

For instructional developers, the most difficult challenge is making the shift in mindset to training as real-time learning. Most are programmed to think courses, classrooms, and workshops. But, once this change in thinking has been made, the rest can be tremendously exciting and rewarding. We have a lot of powerful tools to use, and the old ones will be more important than ever. As we marshal the new world of high tech into the more familiar territory of high touch, we will be better for it if we go forward knowing that, at the end of the day, to make learning memorable, motivational, and magical, the most effective solution is not as much about selecting one delivery system over another as it is about leveraging their combined power for the learner. 🏔

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