Chapter 1

Thinking Critically to Move e-Learning Forward

Patti Shank,
Learning Peaks, LLC

About This Chapter

This chapter answers the question: "Why should people think critically about e-learning?" Education, in general, and e-learning, in particular, suffer from a strong case of hyperbole. Strong claims are made that are neither rooted in solid research nor borne out by practice. Consider, for example, the unrealistic projections for growth in e-learning. Growth of e-learning in the workplace, universities, or schools has not met the unrealistic projections of the dot-com era. Executives and administrators do not understand learning or e-learning and, as a result, many have made poor purchases of e-learning infrastructure and applications and have been prey for less-than-scrupulous vendors. Because of close relationships between vendors and the press, the trade press has not always been as forthcoming as it could be about the claims made by e-learning vendors. Most significantly, many e-learning implementations in universities and workplaces have failed to meet expectations.

Yet, e-learning has certainly enjoyed some success as well. Students taking online courses from universities, especially non-traditional students (those who do not live on campus and who typically have family or work responsibilities) appreciate the fact that online courses and degree programs allow them to reap the benefits of higher education.

In both universities and workplaces, use of e-learning grows, even if slower than original projections. e-Learning has found significant success in particular niches, such as e-portfolios in schools, course management systems in universities, and blended learning in workplaces. e-Learning has moved past the initial hype. During this period, realistic and sustainable uses of e-learning are being realized. Each chapter in this book explores lessons learned as e-learning moves past the hype to integration into the daily fabric of teaching and learning in all kinds of settings.

The Bad News

Education in general, and e-learning in particular, suffer from a strong case of hyperbole. Strong claims are made that are neither rooted in solid research nor borne out by practice. Consider, for example, the unrealistic projections for growth in e-learning. According to one estimate made in 2000, 53 percent of all corporate learning would be online by 2003. Studies conducted since then suggest that actual adoption is proceeding more slowly—only representing 10 to 20 percent of all corporate learning (Dolazelek, 2004; Sugrue & Rivera, 2005). In the university sector, once touted as a strong candidate for e-learning, high-profile launches of e-university efforts, like Columbia University's FATHOM and New York University's NYU Online, met equally high-profile crashes soon after the dot-bomb in 2001–2002.

Studies indicating satisfaction with e-learning applications are similarly suspect. For example, participants may be hand-selected

by vendors, so the opinions of extremely dissatisfied customers are not likely to be included. Even claims about the effectiveness of online teaching are overly exaggerated and lack an understanding about how people learn. Consider, for example, claims by some proponents of e-learning that it is significantly more effective. Several meta-analyses of comparisons between e-learning and classroom learning have concluded that media and technologies make little difference in learning outcomes (Bernard, Abrami, Lou, Borokhovski, Wade, Wozney, Wallet, Fiset, & Huang, 2004; Russell, 2005).

Many people don't understand basic definitions or key concepts of e-learning. For example, according to an annual study of training directors, only about one-third feel comfortable describing terms like knowledge management, learning content management systems, and performance technology to people outside of the training function (Carliner, Groshens, Chapman, & Gery, 2005). Yet these people must secure the funding needed to implement e-learning in an organization.

Vendors of e-learning applications and development services have preyed on this naïvete. Some vendors push a one-size-fits-all approach to take advantage of clients' lack of understanding. Sometimes, they promote false or insignificant distinctions in technology to differentiate themselves from their competitors or use phrases like "SCORM-compliant" without explaining the underlying "gotchas." For example, one vendor claimed to be the only vendor of "true" e-learning because its software ran on the client PC while its competitors' primarily ran on the server. To most users, the distinction is non-existent. Another hyped its unique directory structure that wasn't really all that unique; any vendor could offer it but, as a result of customer requests, most chose not to (Carliner, 2003).

Seeking to entice readers in an era during which people are desperately searching for the "next big thing" to follow the admittedly watershed emergence of the Internet, our trade press has only magnified the problem, publishing ideas of dubious value and articles of similarly dubious research. For example, the concept of workflow-based training is essentially a repackaging of a 1990s-era concept, electronic performance support systems (EPSS) with an

admittedly clearer name (Gery, 1991), but none of the first articles about workflow-based training cited Gery's watershed book on electronic performance support systems, giving the false impression that a derivative concept was actually original. More seriously, because they are a significant source of advertising dollars, the trade press has been reluctant to take on vendors, even when customers complain about the technology, service, and integrity of their vendors.

On a practical level, this failure to think critically and to publish and act without performing due diligence (also known as research) has proven to be dangerous.

How dangerous? You decide. Some clients want quick answers. The vice president of training for a Fortune 100 corporation called a consultant asking for a recommendation of an authoring tool and was dismayed when the consultant advised him that she needed more information before doing so. The vice president replied that he would ask someone else who would give him what he wants. Executives like him are finding consultants to give them easy answers, but the results are troubling. For example, one engineering firm chose a rapid e-learning solution—one in which they could develop a brief lecture in PowerPoint, record narration, and make the recording available through a learning management system. The system ensured on-demand training that the staff could develop at a low cost and short lead times. But after a year and a half and the development of fifty-four courses, only 194 course completions had been recorded. (That is, each course had been viewed, on average, slightly less than four times.)

Universities and schools face similar challenges. For example, one private university launched an e-degree just before the Internet boom. But when the university staff wanted to update the software a couple of years later to match current industry standards, they could not do so. The administration gave the contract for hosting and tracking the courses to a public relations firm, whose president served on the university's board of directors. Similarly, schools feel challenged to integrate technology into the classroom, but it's only partially integrated. Part of the problem may lie in schools' insistence on using

traditional models of professional development to introduce teachers to the technology. These models often require weeks of training during the summer or two days of training during the school year, and ongoing support throughout the school year. Perhaps school systems need to borrow ideas from the workplace like just-in-time and build in ongoing support, because isolated workshops, no matter how long, are unlikely to impact teaching habits in any meaningful way.

Clients may want an online learning strategy that simplifies moving content online and tracking learners, but if they are looking for *really* reduced training costs and effective learning, many are setting themselves up for disappointment. Consider, for example, one study that found that, rather than reduce costs, online courses at universities are actually about $100 (Canadian) more expensive to offer per student than classroom courses (Qayyum, n.d.). Although e-learning courses do not require traditional classrooms and buildings, they are often more resource intensive to produce and deliver because of the need for instructional designers, media developers, course management system administrators, infrastructure and other technology, and increased hand-holding provided for new online students.

The workplace has faced similarly disappointing outcomes. Vendors and executives hear the right word—effectiveness—but get the concept wrong. As one blogger observed:

> (T)he canned-learning supply chain is easy to manage and control, which is more important than any ultimate impact on business performance. After all, we are judged on measurable results, so we shoot for measurable goals. And that learning supply chain, with which we are now all so comfortable, is just loaded with measurability—especially now that we have an LMS to automate the work for us. (Parkin, 2005)

Delivering instructional content online (or elsewhere) is insufficient to produce learning or usable skills. Desirable outcomes require far more effort than building instructional content.

Learning professionals have bought into simplistic half-truths that are easy to digest but lead to less-than-satisfying outcomes. In fact, when training professionals primarily from countries in the European Union (EU) were surveyed about their views of the quality of e-learning based on usability, design, content, and interactivity (Massey, 2002), more than half felt the quality of existing e-learning was poor or fair. Only 6 percent rated it as very good or excellent. Similarly, according to another study, about 75 percent of workplace implementations of e-learning have proven less than satisfying (Van Buren & Sloman, 2003). We believe that the results are similar in university and school environments.

The Good News

If Van Buren and Sloman found that 75 percent of all workplace implementations of e-learning have proven disappointing, they also found that 25 percent were satisfying. Despite strong evidence that the average, everyday implementation of e-learning has fallen short of expectations, evidence also exists that some e-learning has been successful, although often different than predicted in the claims in the initial hype.

Consider adoption. Although adoption has not grown as rapidly as predicted, it has grown—and at rates that most business people would call respectable. Even during the economic downfall of 2001 through 2004 that caused a two-year drop in spending on corporate training (Dolezalek, 2004), and significant drops in public funding for education in the United States, e-learning spending and usage grew.

In the higher-education sector, the Sloan Consortium (2004) reports growth of online enrollments in higher-education courses at greater than 20 percent. Furthermore, the Sloan Consortium found that students are as satisfied with online courses as they are with classroom-based courses and the learning outcomes are equivalent, matching results from other studies showing that media and technologies are not the preeminent factors impacting instructional outcomes. In the corporate sector, the International

Data Corporation (2004) predicted a 30 percent increase in yearly corporate e-learning spending worldwide through 2008, with the market growing from $7 billion in 2005 to over $15 billion in 2008. As the study noted, the press focuses on the high profile failures, not the everyday successes.

Similarly, rather than focusing on whether online or classroom instruction is more effective, successful implementations have focused on *how* to make the most effective use of online technologies. Technologies have affordances, characteristics that can be exploited, to enhance teaching and learning, especially when used well and with adequate consideration (Ryder & Wilson, 1996). These affordances can support learning, allow connections to people and objects that are not in learners' immediate physical environment, and provide opportunities that are not easily available otherwise (Harasim, Hiltz, Teles, & Turnoff, 1996; Ryder & Wilson, 1996).

In corporate training, a Canadian report (corroborated by a private U.S. study) found that organizations have the most success with e-learning in certain subject areas, such as software and technical training (Bloom, 2003). e-Learning seems to be most successful—in terms of completions—with content that is either required or that is linked to an external incentive, such as certification.

Similarly, rather than replace the classroom, e-learning has supplemented the classroom in many learning environments. In schools, tools like electronic portfolios (Abrami & Barrett, 2005) have the potential to provide students with significantly higher levels of feedback on projects as well as help them learn how to accurately self-assess their learning and skills. Course management systems (CMS) have become *de rigeur* in most colleges and universities. Instructors use these systems to post syllabi, assignments, and lecture notes, as well as carry on discussions with students between class sessions. In the workplace, rather than designing learning programs that are exclusively online, many organizations have adopted a blended approach to learning, in which parts of the instruction occur online and the rest occurs in the classroom (Rossett, Douglis, & Frazee, 2003). Proving similarly popular are virtual classrooms, which provide for live instruction without the travel (Hoffmann, 2003).

The Real News

e-Learning didn't replace classroom learning and does not seem poised to do so now. Lured by lower potential costs, executives in the workplace and administrators in universities and schools were not aware that e-learning takes, on average, 5.5 times the amount of development as classroom courses and, in university environments, requires more effort to teach because of the need for individual help, handling student frustrations, and assisting students with course technologies.

Despite satisfaction with online programs, students in online higher education courses are often uncomfortable using online learning communication tools such as discussion forums. Commonly reported problems include confusion about how to use the technologies and the learning curve imposed by them (Cartwright, 2000), reservations about putting their thoughts in print, and worry about perceptions by others and lack of visual cues (The Centre for Systems Science, 1994; Shank, 2002).

As a profession, we approached e-learning with much anticipation but too little analysis. Zemsky and Massy (2004) set out to find out how the reality of e-learning differed from the original assumptions about e-learning on higher education campuses and found that original assumptions were based on the mistaken notions of early adopters. Many institutions needed to make a commitment to improving educational quality and service when they invested in e-learning, but instead chose to invest solely in the software and hardware. The best outcomes from instruction, whether delivered online or not, come from good instructional practices and processes that support skills beyond the classroom.

As we see pockets of success—and strong success, like the use of course management systems in colleges and universities and blended learning in the workplace—we also see e-learning maturing from its youthful euphoria to a more reasoned discipline. Perhaps Gartner's (2005) Hype Cycle describes this trend. It explains how new technologies move from introduction to productivity phases, and provides a helpful way to think of the changes

we are seeing in this field. When most technologies are introduced, they pass through a phase of inflated expectations, or hype. When expectations prove to be unfounded, an inevitable disillusionment follows. At the depths of this disappointment, the real possibilities for using the technology emerge. We've definitely passed through the hype stage into disillusionment. So perhaps, we can more easily and realistically consider the possibilities for e-learning, ones that can be sustained in a large number of environments.

That's the goal of this book—to initiate deep conversations about e-learning and propose real, do-able, and sustainable uses of e-learning that are valuable to all stakeholders.

Even without the hype, new technologies are adopted in stages. In the first, people use the new technology to do old things. In terms of e-learning, this meant automating record keeping and teaching rote courses. But people eventually realize that the new technology offers more promise than automating old tasks; they provide a new way of working. And we're starting to see that now. Online technologies let learners keep electronic portfolios that not only serve as an electronic archive, but as a source of feedback, and competency tracking and job-seeking tools. Learning management systems can track significant information about competencies and recommend career development strategies, assist with candidate selection, and perform similar tasks. In terms of teaching, online learning can blend with classroom learning in a variety of ways. We're also discovering informal learning—learning that challenges some of our very notions about objectives and evaluation (Driscoll & Carliner, 2005).

In other words, having moved past the hype, we can now really consider using e-learning in transformative ways. Doing so requires an honest assessment of what we have done and how it has fared, as well as realistic assessments of what we could do with e-learning, but have not yet done successfully.

Saul and I believe that the future of learning is inextricably tied to the use of technology for learning. We also believe that, rather than considering the use of technologies alone, we must consider their use within the broader context of learners, instruc-

tors (in whatever setting they find themselves), learning environments, and society. Technology is only important insofar as it supports these. And, in my opinion, we have not yet begun to harness the potential of online technologies for learning.

Our contributors share this belief, but each expresses it in his or her unique way, from his or her unique vantage. This book a conversation among these colleagues. So let's begin the conversation.

References

Abrami, P., & Barrett, H. (2005). Directions for research and development on electronic portfolios. *Canadian Journal of Learning and Technology, 31*(3).

Bernard, R.M., Abrami, P.C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Wallet, P.A., Fiset, M., & Huang, B. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of Educational Research, 74*(3), 379–439.

Bloom, M. (2003.) *e-Learning in Canada: Findings from a 2003 e-survey.* Ottawa, ON: Conference Board of Canada.

Carliner, S. (2003). Ethics and the marketing of technology for training and performance improvement: A commentary. *Performance Improvement Quarterly, 16*(4), 94–106.

Carliner, S., Groshens, J., Chapman, B., & Gery, G. (2005, May 23). Strategic trends: An analysis of 6 years of the *Training Director's Forum* survey. *Training Director's Forum.*

Cartwright, J. (2000). Lessons learned: Using asynchronous computer-mediated conferencing to facilitate group discussion. *Journal of Nursing Education, 39*(2), 87-90.

The Centre for Systems Science. (1994, September). Trouble in paradise. *Centre for Systems Science Update Newsletter, 6*(3). Simon Fraser University, Burnaby, BC.

Dolezalek, H. (2004). Industry report 2004. *Training, 39*(9), 21–36.

Driscoll, M., & Carliner, S. (2005.) *Advanced web-based training: Adapting real-world strategies in your online learning.* San Francisco, CA: Pfeiffer.

Gartner. (2005, August 5). *Gartner's hype cycle special report for 2005.* Retrieved from: www.gartner.com/DisplayDocument?ref= g_search&id=484424

Gery, G. (1991). *Electronic performance support systems.* Toland, MA: Gery Performance Press.

Harasim, L.M., Hiltz, S.R., Teles, L., & Turnoff, M. (1996). *Learning networks: A field guide to teaching and learning online*. Cambridge, MA: MIT Press.

Hoffman, J. (2003). *The synchronous trainer's survival guide.* San Francisco, CA: Jossey-Bass.

International Data Corporation (IDC). (2004, November). *Worldwide and U.S. corporate elearning 2004–2008 forecast: Behind the scenes with elearning, a business enabler.* Author.

Massey, J. (2002). *Quality and elearning in Europe.* Retrieved from: www.elearningage.co.uk/go1.htm

Parkin, G. (2005, March 18). *New paradigms for learning.* Retrieved from: http://parkinslot.blogspot.com/2005/03/new-paradigms-for-learning.html

Qayyum, A. (n.d.). Comparing apples and apple computers: Issues in costing e-learning and face-to-face teaching. Unpublished manuscript.

Rossett, A., Douglis, F., & Frazee, R.V. (2003). Strategies for building blended learning. *Learning Circuits, 4*(7).

Russell, T.L. (2005). *No significant difference.* www.nosignificant difference.org.

Ryder, M., & Wilson, B.G. (1996, February 14-18). *Affordances and constraints of the internet for learning and instruction*. Paper presented at Association for Educational Communications Technology (AECT).

Shank, P. (2002). Learning anew: An exploratory study about new online learners' perceptions of people interaction and learning

to learn in an online course. In P. Barker & S. Rebelsky (Eds.), *Proceedings of educational multimedia, hypermedia & telecommunications (EDMEDIA)* (pp. 2167-2171). Charlottesville, VA: Association for the Advancement of Computing in Education (AACE).

Shank, P. (2004, December 6). An end-of-year-conversation with e-learning leaders. . . What's on their minds these days? *The eLearning Developers Journal.* Retrieved from: www.learningpeaks.com/pshank_Guild_endofyear2004.pdf

Sloan Consortium (Sloan-C). (2004). *Entering the mainstream: The quality and extent of online education in the United States, 2003 and 2004.* Retrieved from: www.sloan-c.org/resources/survey.asp

Sugrue, B., & Rivera, R. (2005). *2005 ASTD state of the industry report*. Alexandria, VA: American Society for Training and Development.

Van Buren, M.E., & Sloman, M. (2003). *e-Learning's learning curve: Will they come, will they learn?* American Society for Training and Development International Conference and Exposition. San Diego, California, May 18, 2003.

Zemsky, R., & Massy, W.F. (2004, June). *Thwarted innovation: What happened to e-learning and why.* Learning Alliance at the University of Pennsylvania. Retrieved from: www.irhe.upenn.edu/Docs/Jun2004/ThwartedInnovation.pdf.