



Engaging with the new eLearning

Allison Rossett and Antonia Chan

“I have been having these two parallel dreams about eLearning. One is rosy and rich with possibilities. The other isn’t quite a nightmare, but it has people running down corridors and bumping into walls.”

Allison Rossett wrote that in 2002 in *The ASTD E-Learning Handbook*.

The statement is as true today as it was then, even as we welcome social networking, virtual environments, wikis, blogs, and performance support to eLearning.

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A good news/bad news story

The good news is plentiful. eLearning enables us to deliver both learning and information at will—dynamically and immediately; to tap the knowledge of experts and nonexperts and catapult those messages beyond classroom walls and into the workplace; and to know, through the magic of technology, who is learning, referring, and contributing—and who is not.

That is the bad news. Many fail to embrace eLearning. The sophomore taking Introduction to Western Civilization via distance learning falls behind on assignments. The customer service representative looks at two of the six eLearning modules and completes only one. The supervisor, who had the best intentions, is too busy with work to be anybody’s e-coach. The executive, another with good intentions, never gets around to listening to the podcasts and is AWOL on a related blog.

Every industry study reveals marked increases in training and development delivered via eLearning, with disappointing numbers characterizing participation and persistence. Jack Phillips and Holly Burkett (2007) reported grim news about what their studies have shown: “... that participants in eLearning programs are less likely to follow through than in an instructor-led program.”

A 2003 study by The MASIE Center found an eLearning dropout rate of about 26%. Although this rate is vastly higher than classroom attrition rates, the MASIE number is optimistic compared to what others have found. Frankola (2001) and Diaz (2002) estimated dropouts at 20–50%, with Flood (2002) pointing to an eye-popping rate of 80%.

eLearning 2.0

eLearning achieves its potential when used repeatedly over time and place by engaged participants. Engaged people seek out online lessons and references—and now, in this Web 2.0 world, they also contribute generously, making choices to both consume and create resources. For example, a student exhorts far-flung team members to work together to complete a WebQuest. An auditor turns to an e-coach to solve a knotty problem, and then creates a wiki entry documenting lessons learned. A sales manager uses a performance support tool to qualify customers and then joins a blog to provide feedback about how the tool could be more helpful. A petrochemical engineer builds a simulation in Second Life to reveal to novices the implications of decisions about where and how to drill. A graphic artist eschews a class and instead attempts to get the most out of a new software package by text messaging with four friends while piloting it.

Obviously, eLearning has grown to be more than lessons and tutorials (Rosenberg 2006; Rossett and Schafer 2007). That certainly is true for Vera, a salesperson for an international software firm. To anticipate the new products her company will release, she relies on a blog. There, she reads about emerging products and provides developers with feedback from customers about their concerns. When a customer stumps her with a question, she turns to her personal digital assistant (PDA) for access to the web and her corporate portal. On the spot she e-mails relevant resources to the customer. In addition, her e-mail directs her to a website where she finds a series of podcasts about the competitive landscape for software in her vertical markets. Vera also fulfills compliance requirements online, because she prefers not to return to the training center for a class.

Vera has received a new PDA through her company. Although there is positive buzz about her new PDA, the Palm Treo, Vera has held on to her old favorite. After nudging from her manager, she watches an online demo, shown in figure 1, that shows how the PDA works and why it is worthy of her attention.



Figure 1. Sprint Palm Treo demonstration in Adobe® Presenter software.

During a lengthy sales trip, Vera tunes in from Bangalore, India, to watch a simulated approach to a key decision-maker and then selects an archived Adobe Presenter briefing about a new product. After a conversation with her supervisor and eager for a promotion to sales manager, she signs up for a series of scenario-based eLearning modules that promise to boost her people management skills.

Vera acknowledges that she needs help selling at higher levels in the organizations she serves. She goes to the regional center to take a two-day class. She then relies on an e-coach with whom she practices right before attempting to use these skills in the field.

Expert, vetted messages and lessons are available when and where Vera needs them. And she and peers are urged to weigh in as well, through blogs and wikis, and in a lounge recently launched on the Second Life corporate island.

Vera's experiences are recognizable as training and development, certainly, but also as support, guidance, community, assessment, and informal give-and-take. None of it, however, is worth anything if ignored.

Engagement with the new eLearning

Although she scarcely notices it, Vera is into this new eLearning. Will others do what she has done and take advantage of these new forms? Will they access them at work, on the road, and at home? Will they contribute their ideas so that others may benefit? Will supervisors encourage their people in these directions and contribute themselves? Will instructional specialists embrace blended, participative, and emergent forms of eLearning?

What can be done to make online experiences compelling and increase the odds that employees and students will give these approaches a chance? Here we highlight a dozen strategies that focus on the programs themselves.

1. **The eLearning must be perceived as useful by participants.** Recently, one of the authors asked a group of online students, most based in Hyderabad, India, about how to increase engagement. There was no debate—all agreed on the most important factor. If you want engaged eLearners, they must see the value in what is available and what is asked of them—and they must spot that importance swiftly. There is little patience for murky benefits to be revealed in the future.

Let's look at an example of obvious value to social workers, psychologists, and psychiatrists. Schizophrenia? What is that? Why is it so debilitating? The UC Davis Virtual Hallucination Clinic (as shown in Figure 2) plunges us into their world through an experience in Second Life.



Figure 2. UC Davis Virtual Hallucination Clinic in Second Life.

2. **If value is not obvious, a vivid case must be made.** Use testimonials. Point to data from the needs assessment. Show a problem or case that reminds participants about why they should care. For example, the Flex Your Power website attempts to persuade Californians to be more energy efficient. In the Flex Your Power Challenge, Les Power, the virtual game show host, makes a strong case for decisions that favor the environment.

As useful as Robert Mager or Robert Gagne styled objectives are for planning programs, they should never appear online. Put outcomes in plain language, as shown in figure 3. In this example, pilots can readily answer the key question: Is this for me?

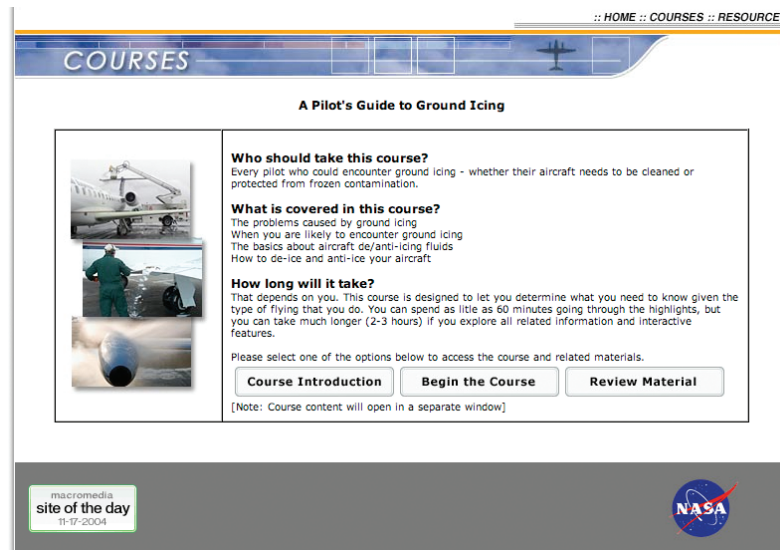


Figure 3. Online course for pilots by NASA.

3. **The program must provide opportunities for success, not failure or uncertainty.** One of the authors signed up for an online course about investing. Module 1 went well. She scored 90% and went proudly and merrily forward with her online learning. At the close of Module 2, on a test about bonds, she scored 65%. The would-be investor never got around to returning to the remaining four modules. Why? In large part because her confidence took a hit. To motivate and maintain involvement, nurture self-efficacy in participants (Bandura 1982). Rather than testing participants to reveal how much they do not know, remind them of related prior knowledge and past successes.
4. **Make it real.** Make certain that the programs match the audience in topic and level. For novices, according to Kalyuga, Ayres, Chandler, and Sweller (2003), rely on worked examples that directly demonstrate how to do or think about high-value tasks and challenges. For audiences with expertise, discovery-oriented approaches, such as cases and problems, are suitable.

Aplia promises professors and students that their programs will engage, teach, and motivate economics students. They do this in part by anchoring online programs to something familiar to students and professors, the textbook. Figure 4 shows texts and online strategies. Predicated on content from the text and lessons presented in class, students are pressed to consider how economics concepts manifest in current events, cases, and problems. A blog welcomes faculty thoughts about how Aplia is best integrated into instruction.

aplia

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> PRODUCTS

Baumol and Blinder

Try a Demo

Baumol/Blinder - Microeconomics

Assignments

Problem Sets
Students stay actively engaged in their coursework by regularly completing interactive problem sets developed specifically for your textbook. Aplia offers original, auto-graded homework problems—each question providing detailed feedback. Aplia will work with professors to customize these assignments to their course.

Math and Graphing Tutorials
Students prepare to learn economics by using interactive tutorials to overcome mathematical deficiencies. Assigning these tutorials frees professors of the need to spend valuable class time reviewing graphs, slope, area, numerical calculations, and equations.

Experiments
Students gain a richer understanding of economics by experiencing economic phenomena in real-time, online, interactive market experiments. Follow-up assignments ensure that students connect experiment results to key course concepts.

News Analyses
Students learn to connect course theories to real-world events by reading relevant news articles and answering graded questions. Aplia continually publishes news analyses to keep these assignments current.

Features

MICROECONOMICS
Principles and Policy, 10e

MACROECONOMICS
Principles and Policy, 10e

ECONOMICS
Principles and Policy, 10e

Essentials of ECONOMICS
Principles and Policy, 10e

CENGAGE Learning

Figure 4. Economics course offerings by Aplia.

5. Since the new eLearning relies on involvement and generosity, reveal what that participation might look like. Washington State University executive Gary Brown, interviewed in 2008 by Grush, acknowledged that full-time undergraduates are no longer in the majority, “Fifty percent of our college population goes to community colleges and must work, and continue to work. That population will be increasing. And about 50% of the college population is ‘swirling’ now; students are taking courses from multiple colleges and universities—from at least two institutions, and sometimes more.” When participation is idiosyncratic and irregular, it is critical to lead, teach, and guide people about how to participate. What are my options for joining in? How do I create a podcast or contribute to a blog? Is my privacy protected in social networks? What does this have to do with learning and development? With accomplishments and results? Who is available to help me with these new forms? Create examples that demonstrate a day or a week in the life of someone who is fully on board.
6. **Make it active and thoughtful.** Are lessons and modules spiced with opportunities to do something, to recognize errors, and to contemplate implications? In the program created by Allen Interactions (shown in figure 5), Manpower salespeople are plunged into sales-call scenarios. As they make choices, they receive immediate feedback about how that choice influences credibility and client interest. A virtual coach reflects on choices and points out missed opportunities.

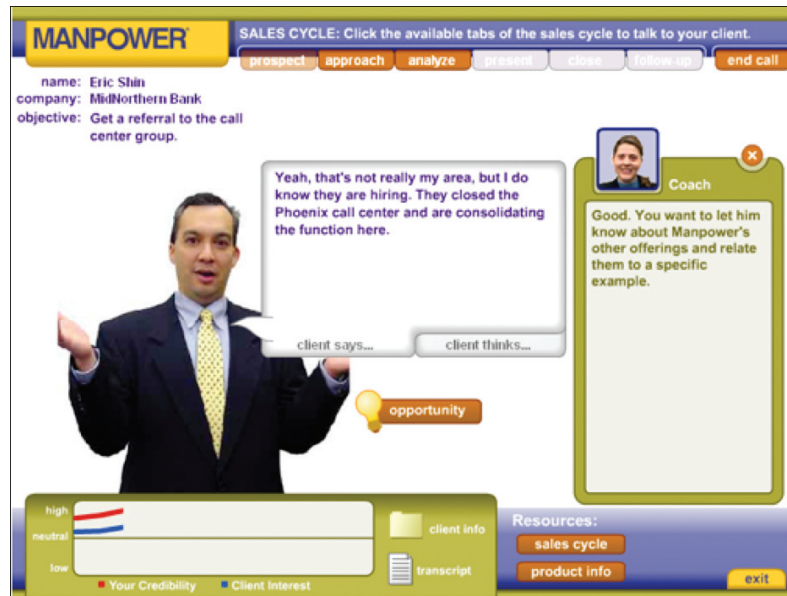


Figure 5. Manpower sales training module by Allen Interactions.

7. **Showcase people, emotions, and successes.** Show how people feel about what they are learning, doing, and achieving. Feature Vera, the salesperson, and her colleagues as they use online communities to introduce a new product or ensure compatibility with the installed base. Tell stories of what it means to be able to pull up a new study or industry report on the spot to satisfy a client's quest for information. Share the value of access to on-demand resources and relationships. Encourage students to look and listen in on how astronauts eat, sleep, and exercise in space, including the factoid that they will snore in space if they snore on Earth.
8. **Guide and track participants.** According to Fred Paas and associates (2005), unstructured experiences increase the risks associated with eLearning especially for novices. Paul Kirschner and colleagues (2006) advanced that point: "Controlled experiments almost uniformly indicate that when dealing with novel information, learners should be shown what to do and how to do it." These reviews highlight the importance of orientation, guidance, human touch, and worked examples, especially at the get-go. As shown in figure 6, prospective college students can take tours guided by their virtual analogues. These virtual students tell them what a day at Wesleyan University is like, about popular classes, and where people hang out on campus. What better way to learn about a university than through a guided tour by someone like you?

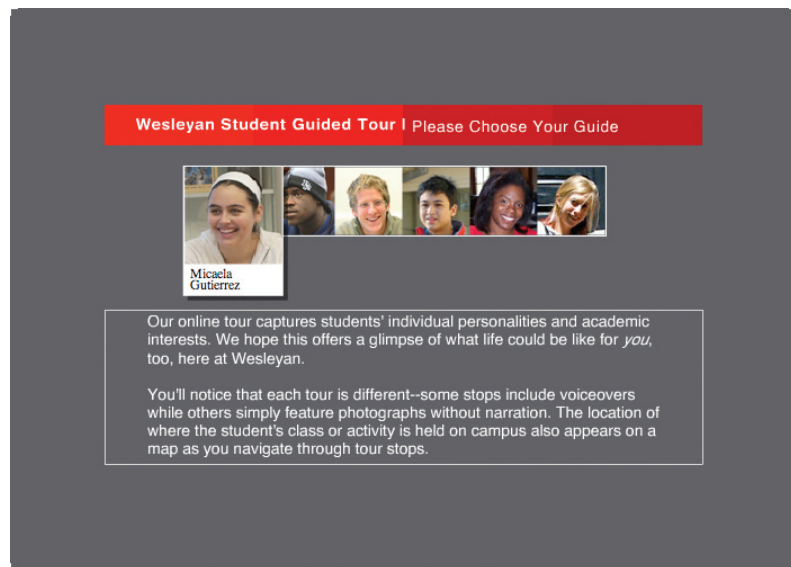


Figure 6. Wesleyan University virtual tour guides.

"Is Wesleyan right for me?" is a focused question, with only three possible answers (yes, no, or maybe). Most online programs are devoted to more complex matters, such as leadership, sales competence, financial audits, or customer service. When there are many outcomes, modes, paths, interpretations, and expectations, a guidance system is necessary. A guidance system structures and constrains choices. It helps people know their options, see where they are now, judge how they have fared, and figure out what to do next. How did I do on that simulation? What subsequent experience is appropriate? What other options exist to answer that question? What remains to be done to fulfill compliance or certification requirements?

Multiweb Communications' TeachCTA trains doctors in how to diagnose heart disease as shown in figures 7 and 8. Physicians can check images to recognize lesions based on actual patient cases, record notations, and then validate their approaches through comparison of their efforts with those of prerecorded experts.

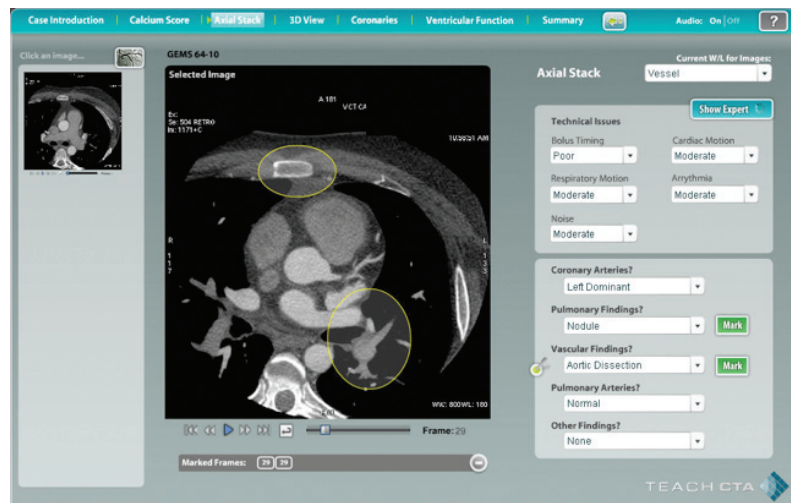


Figure 7. Diagnosis exercise in TeachCTA.

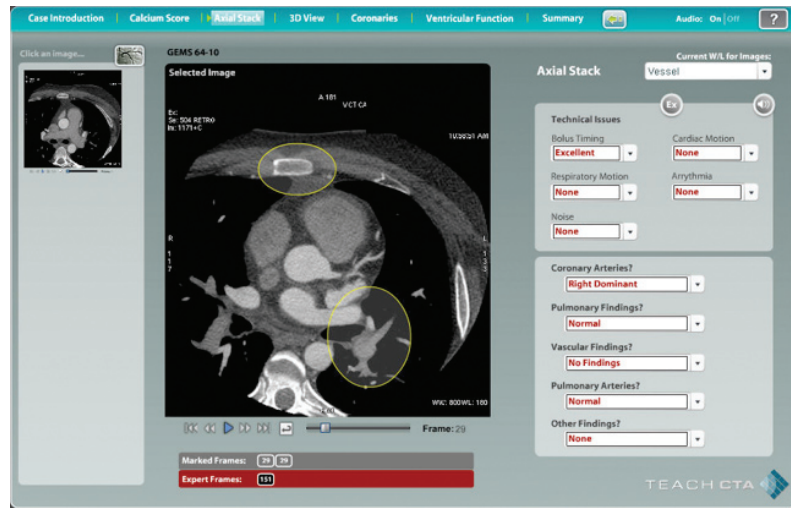


Figure 8. Expert feedback in TeachCTA.

9. **Situate eLearning within a blend.** Is it possible to learn to lead, analyze, or repair after a single class, even a great class, in a room or online? Most would say no.

A blended experience transcends any single experience scheduled at a particular time or place. Blends move lessons, information, and collegiality closer to where and when they are needed. eLearning, of course, is often part of a blend—modules could be paired with a performance support tool, a blog, online assessment, lunch chats with peers, and a tracking system, all combined to support a common goal.

Blends are of particular value when knowledge workers roam to various locations. The very global and far-flung Siemens sales force is an example. Over the years, Siemens has created diverse resources for salespeople. How do these busy people find just what they need, when so much is offered? ISITE Design created the BeFirst portal, leveraging Google search as well as structured taxonomy filtering, to allow Siemens salespeople to locate relevant assets.

BeFirst applies social media strategies to add value to sales materials, encourages user-driven content, and provides a forum for sales collaboration. Project manager John Jones described the effort this way: “BeFirst users can sign up for pushed e-mail alerts on all key topics, discussion threads, comments, and resource updates. A weekly newsletter and e-mails drive users to new updates, features, and key content.”

When asked about how they attract and hold participants, Jones’s eLearning colleague, Sean Cowne, responded, “To ensure ramp-up and engagement, ISITE Design delivered a ten-minute training module. The module, created with Adobe Captivate® 2, guided users to create communities of practice, shared content, and discussion threads.”

10. **Make relationships, collaboration, and teaming a part of the effort.** The phenomenon of an online community is becoming increasingly important. In a blog, wiki, or discussion board, people gather to talk about politics, standard poodles, new products, or whatever topic they might be studying. Even with halting acceptance by university faculty, online communities provide tangible benefits for learning and collegiality, according to a 2007 review by Oliver and his colleagues.

Even though classroom instruction is appropriately praised for intimate, interactive moments, technology is no slouch at forging connections. Everyone reading this paragraph knows somebody who met somebody special online. Quitnet, for example, provides an online community where people gather to maintain and rekindle their commitment to rid themselves of the smoking habit. Quitnet’s tagline is “Quit All Together.”

One pharmaceutical company brings global teams together online to work on pressing problems; a telecommunications company creates a collaborative workspace to manage a product launch; and college students go to the Aplia website to experiment with the economic concepts they are studying. In figure 9, microeconomic students create a “market” and then experience the results of their choices.

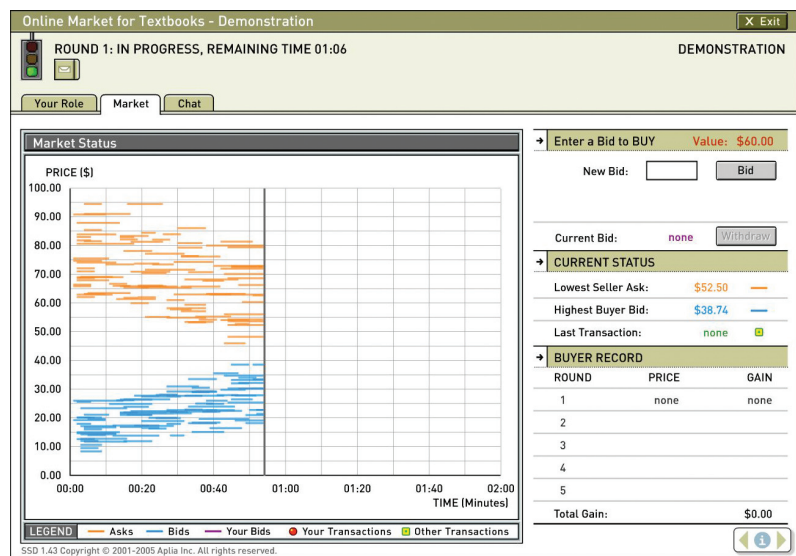


Figure 9. Economics class experiment by Aplia.

11.**Make it WOW.** What is WOW? WOW is when it all comes together to create something dramatic, compelling, valued, and authentic—something that draws participants in and gives them a way to be involved. For example, the space station has been omnipresent for decades—it is not so WOW anymore. What’s WOW, as depicted in figure 10, is when each of us can explore the space station just as we wish.



Figure 10. 360° tour of the International Space Station by NASA.

Manga, the Japanese comic style, attracts some WOW reactions. Serious organizations are piloting the form for serious purposes. Figure 11 uses manga to prepare leaders to document responses to a fire incident at a hardware store on Vermont Avenue.

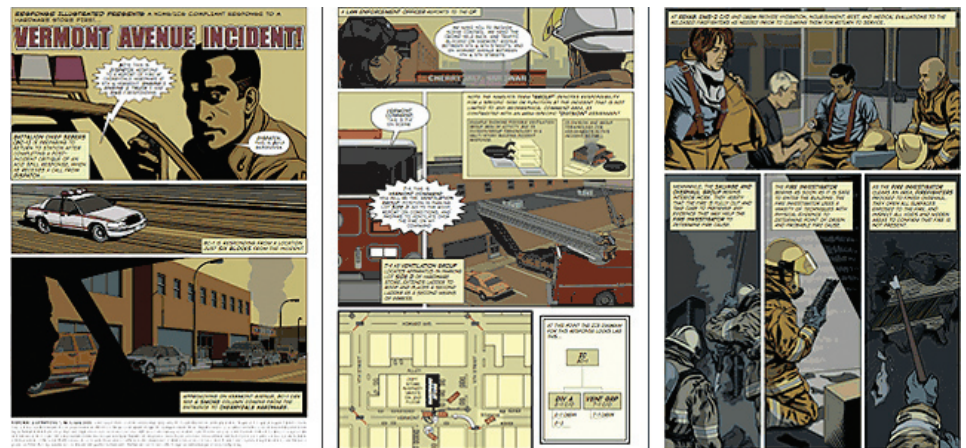


Figure 11. Vermont Avenue Incident Manga by Bartley Collart of L10.

Just yesterday, one of the authors reviewed a manga comic strip whose pedestrian purpose is to convince employees to fill out time cards in a systematic fashion. Before employees' eyes glaze over, they are pulled in by the novelty of the form and kinship with the guy who makes endless excuses for not entering the required information each and every day. He promises to do it tomorrow. He promises to do it later. All goes well until the dreaded external auditor discovers his malingering. This manga strip works because it looks new and because it is not really new at all. That guy could be you. Will the manga form attract attention in 2010? Probably not—but the vivid stories will.

12. Measure and continuously improve. In 2002, approximately 15% of reporting organizations were using technology for delivery of learning programs. By 2004, that number had nearly doubled. The ASTD State of the Industry Report described what award-winning organizations are doing: "BEST organizations delivered 32% of all their learning content using technology. Approximately 75% of technology-based learning was online in 2004, and about 75% of online learning was self-paced." The trend line is clear.

But how is it going and what difference is it making? What approaches should be replicated? What approaches should be tweaked and which ones should be ended?

While eLearning should intrigue educators, it must fill us with curiosity. These new forms require insight into their uses and effects so that they can be advanced (Rossett 2007).

At a minimum, eLearning and learning management systems (LMSs) provide comfort to executives with technology-based information about compliance and risk avoidance. Yet much more is possible. Do learning organizations know what their people already know? Need to know? Want to know? Can they swiftly identify an engineer who speaks Zulu, an attorney with recent experience in Eastern Europe's petrochemical industry, a driver with special ability to avoid accidents? Do they collect and distribute that information? Do they know why some resources are used and others ignored? Do they know which modes satisfy or what questions remain unanswered?

If a tree falls and nobody hears it

ASTD's Learning Circuits attempted to find out what's on people's minds regarding eLearning in 2008. Their little study (ASTD 2008) closed with the question, "What concerns does your organization have about using eLearning?"

The responses were not surprising—topping the list was "employee buy-in." That is the double edge of eLearning and engagement. On the positive side, it enables independence and freedom, with access to learning, guidance, and information as needed by employees and students. Not so glorious is that the use of eLearning resources is not automatic. And when people do take advantage of such resources, they do not always do so consistently.

One employee can take her freedom and exercise it with gusto. Another can take his access and squander it, grumbling about preferring to go to the training center for a few days of respite from the grind.

Every one of us has a horror story about eLearning resources that are frittered away. Some years back, one of the authors visited a company that was producing an online curriculum to teach business skills. The executive described how his company had donated 400 seats to a large global company in order to gather field-based data about program effectiveness. Six weeks later, only 21 people had logged in to have a look. Not one employee had completed the scenario-based eLearning programs.

What happened? It could be that the programs were flawed, that they violated some or several of the 12 principles previously listed.

But even more likely, in this case, were failures in execution and alignment within the organization. There are two aspects to successful engagement: (1) great systems and assets; and (2) organizational readiness for what is a substantial change.

- Did executives at the global company make concerted efforts to introduce the eLearning? They had paid nothing for it and perhaps then invested nothing in it. Did they tell their line leaders how the programs advanced their strategy? Did key leaders try out the program and report on their experiences?
- Were the supervisors familiar with the programs and did they know how to support them? Did they provide support for learners?
- Were employees encouraged and expected to participate? Did they see links between program goals and their own task and career goals? Were they helped when glitches occurred?
- How did the eLearning company itself execute the rollout? Perhaps they had focused their energy on creating the programs and paid scant attention to delivery and support in the field.

Engaged in what?

A New York Times article, "Dumb and Dumber: Are Americans Hostile to Knowledge?" (Cohen 2008), raised questions about what we're teaching in schools and universities. The article cited a National Geographic poll "that found nearly half of 18- to 24-year-olds don't think it is necessary or important to know where countries in the news are located. So more than three years into the Iraq war, only 23 percent of those with some college could locate Iraq, Iran, Saudi Arabia, and Israel on a map."

On September 11, 2001, in New York City, author Susan Jacoby listened in on a conversation in a bar:

"This is just like Pearl Harbor," one of the men said.

The other asked, "What is Pearl Harbor?"

"That was when the Vietnamese dropped bombs in a harbor, and it started the Vietnam War," the first man replied.

It feels almost reckless to worry about engagement without also attending to why we seek to engage their attention. It is easy to imagine scantily clad avatars belly-flying around virtual environments to visit shops, bars, beaches, and restaurants, not online museums and Socratic discussions. Those experiences might be engaging, but should anybody's attention be riveted to them? Purpose is always the best place to start, as discussed in strategy 1.

About the authors

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Sources

ASTD, March 2008. E-Learning trends 2008. Retrieved March 17, 2008, from www.learningcircuits.org/0308_trends.html.

Bandura, A. 1982. Self-efficacy mechanisms in human agency. *American Psychologist* 37(2): 122-147.

Belton, M. (n.d.) Making e-learning work. Retrieved February 28, 2008, from the Learning Technologies website at www.learningtechnologies.co.uk/magazine/article_full.cfm?articleid=242&issueid=25§ion=0.

Cohen, P. February 14, 2008. Dumb and dumber: Are Americans hostile to knowledge? *The New York Times*.

Derryberry, A. 2008. Serious games: online games for learning [white paper, electronic version]. Retrieved from the Adobe website at www.adobe.com/resources/elearning/pdfs/serious_games_wp.pdf.

Diaz, D.P. May/June 2002. Online drop rates revisited. Retrieved March 1, 2008, from the Technology Source website at http://technologysource.org/article/online_drop_rates_revisited.

Flood, J. 2002. Read all about it: online learning facing 80% attrition rates. *TOJDE* 3(2): Retrieved March 1, 2008, from <http://tojde.anadolu.edu.tr/tojde6/articles/jim2.htm>.

Frankola, K. 2001. Why online learners dropout. Retrieved March 1, 2008, from the Workforce Management website at www.workforce.com/archive/feature/22/26/22/index.php?ht=why%20online%20learners%20dropout%20why%20online%20learners%20dropout.

Gao, F. and Wong, D. 2008. Student engagement in distance learning environments: A comparison of threaded discussion forums and text-focused Wikis. *First Monday* 13: 1-7. Retrieved March 1, 2008, from www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2018.

Jonassen, D., Davidson, M., Collins, M., Compbell, J., and Hagg, B.B. 1995. Constructivism and computer-mediated communication in distance education. *American Journal of Distance Education* 9(2): 7-26.

Kahn, W. A. 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal* 33(4): 692-724.

Kalyuga, S., Ayres, P., Chandler, P., and Sweller, J. 2003. The expertise reversal effect. *Educational Psychologist* 38(1): 23-31.

- Kirschner, P. A., Sweller, J., and Clark, R. E. 2006. Why minimal guidance during instruction does not work. *Educational Psychologist* 4(2): 75-86.
- Meyer, J. P., Becker, T. E. and Vandenberghe, C. 2004. Employee commitment and motivation: A conceptual analysis and integrative model. *Journal of Applied Psychology* 89(06): 991-1007.
- Moore, J.L. and Marra, R.M. 2005. A comparative analysis of online discussion participation protocols. *Journal of Research on Technology in Education* 38(2): 191-212.
- Oliver, R., Herrington, A., Herrington, J., and Reeves, T. C. 2007. Representing authentic learning designs supporting the development of online communities of learners. *Journal of Learning Design* 2(2): 1-21. Retrieved March 18, 2007, from www.jld.qut.edu.au/publications/vol2no2/documents/OliveretalJLDVol2No2.pdf.
- Paas, F., Tuovinen, J. E., von Merriënboer, J. J. G., and Darabi, A. A. 2005. A motivational perspective on the relation between mental effort and performance: Optimizing learner involvement in instruction. *Educational Technology Research & Development* 53(3): 25-34.
- Parker, S. K., Williams, H. M., and Turner, N. 2006. Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology* 91(3): 636-652.
- Phillips, J. and Burkett, H. 2007. Measuring and evaluating learning is one of the most critical issues in the learning and development field. *E-learning*, Retrieved March 4, 2008, from www.elearning.b2bmediaco.com/issues/winter08/winter08_BusinessCaseforE-learning.html.
- Ramsay, C. and Finney, M. 2006. *Employee Engagement at Intuit*. Mountain View: Intuit Inc.
- Rosenberg, M. J. 2003. Redefining e-learning. *Performance Improvement* 42(3): 38-41.
- Rosenberg, M. J. 2005. *Beyond Learning: Approaches and Technologies to Enhance Organizational Knowledge, Learning, and Performance*. New York: Pfeiffer.
- Rossett, A., editor. 2002 *The ASTD E-Learning Handbook: Best Practices, Strategies, and Case Studies for an Emerging Field*. New York: McGraw-Hill. <http://books.mcgraw-hill.com/authors/rossett>.
- Rossett, A. 2007. Leveling the levels. *T+D* 61(2): 48-53.
- Rossett, A. and Frazee, R. 2006. Blended learning opportunities [white paper, electronic version]. Retrieved January 3, 2008, from American Management Association website at www.amanet.org/blended/pdf/WhitePaper_BlendLearn.pdf.
- Rossett, A., and Schafer, L. 2003. What to do about e-dropouts: What if it's not the e-learning but the e-learner? *T+D* 57(6): 40-46.
- Rossett, A. and Schafer, L. 2006. *Job aids and performance support in the workplace: moving from knowledge in the classroom to knowledge everywhere*. New York: Pfeiffer. Associated website and tool: www.colletandschafer.com/perfsupp.
- SDSU podcast: <http://pict.sdsu.edu/media/allison.mp3>.
- Shoniregun, C.A. and Gray, S. 2003. Is e-learning really the future or a risk? *Ubiquity* 4(10). Retrieved January 3, 2008, from www.acm.org/ubiquity/views/c_shoniregun_3.pdf.

