# Nine Trends That Will Shape e-Learning in 2008

*By Bill Brandon*

**W**hat will drive change in e-Learning adoption and practices in 2008? This isn't as hard a question as it may seem, since, fortunately, inertia is on the side of the forecaster. Even in e-Learning, most of the time, things change gradually from one year to the next, with each new development growing out of changes that started much earlier.

This year, no matter what else, will probably be one in which organizations consolidate their technology, and establish stable platforms from which they can move on, perhaps to more significant technologies, in 2009 and later. There don't seem to be any truly revolutionary changes to the way we create and deliver e-Learning coming in the next 12 months.

Don't take this to mean that there won't be any changes at all to e-Learning adoption and practices this year! I'd like to offer my view of nine trends that will affect what we do this year, and that are worth paying attention to. What you will be doing at the end of January, 2009 will probably look a lot like what you are doing this week, but the things that you will think of as important changes or developments will probably have their roots in one or more items in this list.
- Business conditions: Recession
- Expanded availability of broadband and WiFi
- Mobile devices with built-in 3G and WiFi

*As we begin 2008, it would be a good idea to look ahead to see whether there are forces at work that will affect how we produce and deliver e-Learning. This week's article is the Editor's view of nine trends that will significantly affect what you do this year.*

## Management Strategies

- "Working in the cloud"
- Video
- Enterprise social networking
- Expectations of users and decision-makers
- Ongoing redefinition and refinement of "e-Learning"
- Continued blurring of e-Learning tool categories

In spite of all the cracks and fog in my crystal ball, here's my best shot at how 2008 might shape up.

### Business conditions: Recession?

Talk of recession has moved from speculation to near-certainty. Some experts don't believe we're in, or headed for, a recession at all. But you know *something* is going on, and nobody is sure just how long it will continue, so it makes sense to pay attention to this first.

Recessions are always somewhat unpredictable in their depth, and as to the countries or markets that they will affect. Sometimes mere apprehension about the possibility of a downturn is enough to make organizations cautious in their planning and budgets.

The most likely overall effects of recession will be to chill the consumer markets, to slow product releases and technology adoption, to negatively affect job growth, and to reduce or reverse the growth of budgets for training, including e-Learning. At the same time, in some organizations a business downturn could actually drive some instruction out of the classroom and onto the network.

If you are in a business or an organization likely to be affected by a recession, you can expect closer scrutiny of your budget, and probably a freeze on hiring. Paradoxically, you may also see more opportunities to provide online learning in support of strategies put in place to deal with business conditions. You may find increased pressure to develop e-Learning faster, and to be more flexible in development and delivery. You may also experience pressure to outsource development rather than add staff or technology.

Here are some things you can consider doing to meet these challenges:

- Standardize e-Learning technologies and vendors across business units
- Purchase products and services as part of a group or industry association
- Negotiate better prices from vendors
- Make more use of Open Source applications
- Look into collaborative Web-based applications for use by design and development teams

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## Management Strategies

• Modify your learning strategy to include mobile electronic performance support

### Expanded availability of wireless broadband

Over the past several years, the availability of wireless broadband has grown steadily, untethering users from their desks. In most urban areas, WiFi hotspots, in-home and workplace wireless networks, and public WiFi mesh networks, make it possible for workers with IEEE 802.11-enabled laptops, PDAs, and the latest iPods to move around while maintaining a high-speed connection to the Internet. In addition, in some cities, wide-area cellular telephone networks (3G) provide high-speed Internet access and video telephony to mobile phones and other devices.

At the same time, in the United States at least, delivery of broadband services via optical fiber and cable to homes and small businesses continues to grow as AT&T, Verizon, and other companies eliminate copper lines and overcome "last mile" issues. Efforts to provide broadband over power lines (BPL) also continue to survive.

While it is difficult to get good numbers on the growth of broadband and wireless service worldwide, there is no doubt that these markets are growing. For example, 3G, which is the most expensive of the services to roll out, may triple in size by 2012. WiMax (longer-range access than WiFi) is the newest competitor, and is only beginning to become available; it will compete with 3G, especially in outlying areas. Each of these methods has its limitations. A WiFi hotspot must have broadband services available, normally via some kind of landline, for the link from the local wireless network to the Internet, and the hotspot's range is limited. 3G can't deliver the bandwidth that WiFi or WiMax can, and it is currently only available in big cities. WiMax is currently limited to only one band of the spectrum (in the United States), and its practical range in built-up areas is between 1.5 and 4 miles (2 to 6 kilometers). In spite of these limits, broadband connections, wireless or not, will be significantly more available by the end of 2008.

This expansion will enable better e-Learning opportunities for learners who travel, or who work from home. I'll address this further in the sections of this article on mobile devices and on "working in the cloud." One possible problem that we may begin to encounter in 2008: Running out of bandwidth (although the projected crunch point doesn't arrive until 2010). We are already seeing less excess capacity, even though the Internet has not exactly "slowed to a crawl" yet. The possibility of this problem hangs on whether the large network providers succeed in adding backbone capacity to meet the rapidly expanding demand – and on whether businesses and individuals are willing to pay increased costs for service.

### Devices with built-in 3G and WiFi

As wireless availability has grown, so also has the availability of mobile devices that can connect to the network by using 3G, WiFi, or both. The latest iPod (the Touch), offers WiFi, the Safari browser, and direct connection to e-Mail, YouTube, and iTunes. Soon it will be difficult to find a cell phone that does not have both a camera and a browser by default. The bigger challenge at the moment is to find phones that offer both 3G and WiFi (for example, the iPhone is WiFi only – no 3G); a user who travels will need a dual-chip 3G smart phone that also uses WiFi. This is not a major challenge, but it is not the default configuration for all smart phones.

Devices such as the Chumby may indicate the

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future direction of other Internet appliances in 2008 – to integrate Net life into real life. Although it is not a mobile device (the user needs to plug it into a wall outlet), the Chumby is a small WiFi terminal that uses software "widgets" to display interactive content on a 3.5-inch LCD touch screen. It does not require connection to a computer in order to receive content. At this point, there is only a bare handful of e-Learning applications for the Chumby (most related to building vocabulary), but it is conceivable that more are coming. If Chumby succeeds, you can be sure that similar appliances will follow, and some are sure to be mobile.

The key feature of these devices, in addition to the mobility of the smart phones, PDAs, and iPods, is that they do not require a desktop computer in order for the user to access online content, including e-Learning. Since they are multi-function devices, the return on the investment required for them will accrue more quickly.

While mobile devices certainly offer a great opportunity for delivery of e-Learning to an increasingly dispersed and de-centralized work force, there is a challenge to their adoption: Information Technology department (IT) policy. Because of the very diversity of the devices, IT has a real problem integrating and securing them. Until IT managers can deal with mobile devices in a way that is compatible with the way they deal with desktop PCs, this will continue to be an issue that slows adoption. If you are going to propose moving e-Learning onto mobile devices, first talk to your IT department to find out what their requirements are. You will need to present the productivity case for mobile devices, and to show how IT can remotely manage device configuration, software, and passwords, as well as how to erase everything on the device if it is stolen or lost. You will also need to work with IT to resolve the development and support issues. Mobile devices present a huge array of rich clients, databases, and microbrowsers – so compatibility with IT's current suite of tools is essential.

### "Working in the cloud"

One of the biggest changes in the way people use their computers and the Internet does not have to do with mobile devices. It is because more and more information is moving to the Web – "in the cloud." We can store worksheets, documents, images, databases, and anything else we produce or use "in the cloud." Previously, users who were out of the office had to rely on remote access to a company server or to their own desktop computers, if they could get authorization and a password, and if they could find a way to make the connection. Travelers, and those who wanted to work from home, had to make sure they had their documents with them when they left the

office. Over the past two years, more and more ways have appeared to put these documents, and anything else we need, "in the cloud" where we can retrieve it easily. Moreover, it's not just content that is going to the cloud – so is computing, in the form of hosted solutions.

The obvious way that this benefits e-Learning is that learners can also access content on the Web. Of course, that's old news. We've been buying online courses from vendors, uploading PowerPoint presentations to the Web, and running synchronous e-Learning for a decade. What is better news is the appearance of online authoring tools. These not only make it possible for e-Learning developers to work "in the cloud" but they also inherently support collaborative development by a dispersed team. Unison, RapideL-i, MyUdutu, Composica, Atlantic Link, and Mohive are already in place, and are probably just the first of many online authoring tools. Expect growth and improvement in this area in 2008, including improved security and better ways to pass information between hosted systems and your LMS and LCMS.

## Video

As a multimedia tool for learning, video has probably been around longer than almost anything else, if you include its use in the classroom. Properly done, video can be very effective, especially for far-transfer of skills and knowledge – learning to apply guidelines under changing circumstances. However, in the past it has been more difficult to deploy online than text, slides, and audio. Cameras capable of producing quality results, desktop computers capable of editing the video, software to do the editing, storage to hold the edited video, and bandwidth to deliver it have all been expensive. They also have all presented significant barriers to entry in the form of learning curves. This is changing, and 2008 could be the year that video becomes a practical alternative to the ubiquitous PowerPoint bullet slide.

Bandwidth is not the problem that it once was. Storage is cheaper and more available, and solid-state drives should make it more compact and portable. There is a plethora of ways to store, share, and distribute your video online. The editing software (some of it) is simpler and easier to use than it had been, and (some of) it has also come down in price. Camcorders have come down in price and size, and have improved in capability. Now the biggest barrier to entry is learning how to use the camera, and how to light what you are recording, and, of course, making good instructional use of video – the same andragogy, design, and script writing problems that we face with other media.

## Enterprise social networking

By now, almost everyone has had some experience with social networking. Facebook is practically a household word. Many Learning Solutions readers also read Weblogs, use wikis, and have LinkedIn accounts. To this point, however, most social networks are public, and outside the control of any one organization. Moreover, even though individuals may use these networks for business purposes, there are legitimate business concerns that work against officially designating such networks as a corporate communication and learning channel. One such concern is security. Another is ownership of intellectual property posted to a member's account.

However, there is a solution. An organization can set up a "White Label" social network, in some cases on its own servers, and control membership, security, and intellectual property issues. As of the end of January 2008, I count well over 60 social networks that can be re-branded this way.

This social network space became terribly overcrowded in 2007, much like the LMS/LCMS world. However, only slightly more than a handful of these are going to see wide adoption for in-house use, such as Lotus Connections, Plone, Drupal, Sharepoint, Joomla, and Ning, plus perhaps a couple of others. A useful collaboration would be to work with operations and marketing groups within an organization to promote adoption; the joint use would improve the return on investment.

Once an organization has set up its social network, there are a number of learning-related ways to use it. In 2008, we will see organizations using social networks to:

- Share knowledge within the organization
- Help employees to find an expert or locate implicit knowledge (this is the connection to informal learning that many e-Learning managers have been looking for)
- Extend the "shelf life" of conferences by letting employees who took part stay connected
- Connect customers to experts who have deep knowledge
- By the end of the year, we should also see social networks that offer access through a virtual world.

## Expectations of users and decision makers

In the past, developments in consumer-oriented technology have been an important pathway for change in workplace technology. Personal digital assistants (PDAs), CDs, and DVDs, and even cell phones found a toehold in the office, and in budgets, only after employees bought their own and began to

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use them on the job. In a similar way, individual experimentation with Weblogs and Podcasts led to their adoption by organizations. Eventually, instructional designers found that they could also use this technology in e-Learning.

In 2007, the trend continued with a large number of clever devices, and clever online services, which have personal, non-business uses and can improve productivity on the job. Online services continue to proliferate, mashups appear weekly, and their users quickly adopt and adapt them for work. In 2007, there were also developments that were clearly intended for organizational use. Like their predecessors, these devices and applications, consumer- and business-oriented, will find a place in e-Learning (many already have, and I've already pointed some out in this article).

In Sidebar 1, I've listed some of the devices and trends that appeared in 2007 that will have the strongest effect on what learners and decision-makers expect in terms of technology, including e-Learning.

Continuing, incremental increases in availability of media and resources, and expansion of the "always connected" cocoon, will certainly affect the expectations of the public and, more importantly, of decision makers. People are more accustomed to being able to connect, to get answers, and to communicate anywhere and instantly, than they were at the beginning of 2007. This will tend to increase the acceptability of mobile learning.

Consumers, and therefore learners, in 2008 expect more sophisticated, easy-to-use interfaces (thank you, iPhone and iPod touch) and devices that work with a minimum of learning curve and no complications (thank you, MP3 players). Because of growing consumer experience with high definition television, with cameras and microphones built into many devices, and with vastly more convenient online access to entertainment, learners will have increasingly higher expectations for visual media and audio. Second Life, and similar online experiences, has given learners a new sense of, and a desire for, the virtual world that was once the preserve of gamers. Social software has created an expectation that online communication should be easy, diverse, rapid, universally available, and light years beyond e-mail when it comes to personal expression.

Learners and decision makers alike expect the same features and refinements in their e-Learning. If designers and developers don't provide an equivalent experience, learners are quite capable of finding it for themselves. They will find it in online user groups and through social networks, where they can ask questions and get detailed expert answers (as well as detailed wrong answers) in a matter of hours, sometimes minutes. Not only do learners know how to do

this, so do subject matter experts, managers, and decision makers.

## Ongoing redefinition/refinement of "e-Learning"

Like most of these trends, this one has been going on for some time – for at least five years, but it's probably been longer than that. Over time, the context of "e-Learning" has moved beyond "training" and "performance support" into the world of collaboration, connectivism, communities of practice, and even further. We are in an ever-widening range of solutions, and there may be no end to the redefinition and refinements.

This constant expansion means e-Learning professionals must themselves constantly be learning. This trend drives experimentation and innovation in e-Learning, and it also creates confusion about our role in the scheme of things. None of this will change in 2008, or ever. Keep up by reading every Weblog on e-Learning you can find, attending conferences, and using social networking to stay in touch with your peers.

## Continued blurring of e-Learning tool categories

If you have read The eLearning Guild's latest 360 Report (*Authoring & Development Tools*, published earlier this month), you probably spent a lot of time with Paul Clothier's essay on Rapid e-Learning Tools. As Steve Wexler observed in his summary of that essay, "Rapid e-Learning tool developers are extending their products' capabilities, and Courseware Authoring tool vendors are adding ease-of-learning wizards and templates, thereby blurring the distinction between the two categories."

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## Sidebar 1 *New technology creates new expectations, frustrations*

New features in consumer devices have changed the way users (who are also learners) think about their personal electronic equipment, and this therefore changes what they expect at work:

- Built-in WiFi: Users expect to be able to access and share content freely (and for free), wherever they are.
- Always connected: Users expect their devices to connect to the Internet by default.
- Built-in video/audio/telecom: Users expect to be able to send and receive images and sound, as well as text, using any device.
- Multi-touch technology: Users expect a simple interface, with as few moving parts as possible.
- Solid-state storage: Users expect very large storage capacity in any device.

At the same time, use of these devices in e-Learning is frustrated or constrained by:

- Limited input options, small screens, and limited storage on mobile devices
- Compatibility issues that can make it a challenge to program or access content
- Obstacles to linking to an LMS
- Current devices and systems may be more suited to performance support, or just-in-time instruction, than to in-depth skill-building

## Management Strategies

This development truly will change the way you work in 2008. It will improve the quality of your e-Learning product, and it will shorten your development time, no matter which side of the spectrum you started out on. Eventually, the artificial division into two types of tools will disappear, and we will have only one category – authoring tools. However, at the same time we should begin to focus on the type of design and development processes that we put in place. The result will be an e-Learning production process that offers methods for rapid development, as well as methods for producing applications to support more complex far-transfer of skills and knowledge, immersive learning, and other forms as needed to deliver desired performance.

### Some questions we need to be asking

As these trends work their way into e-Learning practice in 2008, it will pay to keep several questions in mind, and to try to answer them in the context of our individual circumstances:

- How will we adjust our focus on Instructional Design processes (whether "traditional" or rapid) and on e-Learning delivery media and channels to accommodate the trends?
- What new value-add can we offer decision makers because of the trends and our action in response, that we could not offer in 2007?
- How can we effectively support supervisors and SMEs who want to produce and distribute their own demonstrations?
- What effect will the technology changes (devices and applications) we wish to adopt have on the Information Technology (IT) group?

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