



The Top Five Emerging Trends in Learning Technology

TOOLBOOK® WHITEPAPER

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Introduction

Emerging technologies, like all new ideas, promise the possibility of significant benefits. In the initial stages of adoption, however, those benefits can be difficult to fully reveal. Real success comes only when the factors that drive a technology to grow are strong enough to outweigh any existing limitations.

In the field of learning management, this frequently means user support or demand must be counted among a technology's strengths if it is to thrive. Not surprisingly, users have wielded their unique power to greatly impact today's top five learning technology trends. This paper explores those trends, taking a detailed look at the factors that drive growth, along with those that might deter it. In addition, we discuss next steps to help your organization select new technology strategically in order to unlock its full potential.

Trend 1: Increased adoption of mobile devices

No matter where you go on the globe, you can't escape mobile devices. In fact, according to a study by the Market Intelligence Center in Taiwan, our planet will hold an astonishing 3.3 billion mobile subscribers by 2010¹—possibly over a third of the world's total projected population. It's no wonder, then, that mobile users are now looking to take learning technology on the road.

What's driving the growth?

The **sheer number of mobile users** has clearly set off a chain reaction. Mobile network and service providers are delivering increasingly improved performance, while mobile device manufacturers are now delivering more comprehensive feature sets with greater capabilities. In turn, the more capable devices are spawning a **proliferation of new mobile applications** that give users access to the functionality they have come to expect while on-the-go, including the ability to check email, surf Web browsers, and download GPS maps on-the-fly.

This functionality transforms a standard cell phone into a "smart phone," and demand for these devices is at an all-time peak. Take, for example, the Apple iPhone®. The first version was an immediate hit—and the imminent next-generation launch has users almost frenzied in anticipation. Not only is device functionality improved and cost slashed in half, but Apple finally released an iPhone software development kit, and plans to open an Apps Store that will enable users to download a wide variety of full-featured iPhone applications. As these iPhone-specific applications flourish, users will gain true freedom to work from anywhere.

The expectation of functionality also drives the demand for mobile access to critical learning-related applications. That's because users know—and organizations are obtaining the metrics to prove—that **the ability to work anywhere, anytime, via mobile device helps increase productivity**. Mobile devices aren't as clunky as desktops, don't require the boot time of laptops, and consequently offer a speed and convenience when delivering learning content that keeps workers more active and on-task. Users also want tools that enable seamless learning processes—such as training approvals—even when they are away from the office. LMS solution vendors are recognizing this demand and are making moves to deliver or enable the development of more learning applications for mobile devices.

¹ Market Intelligence Center - Taiwan.

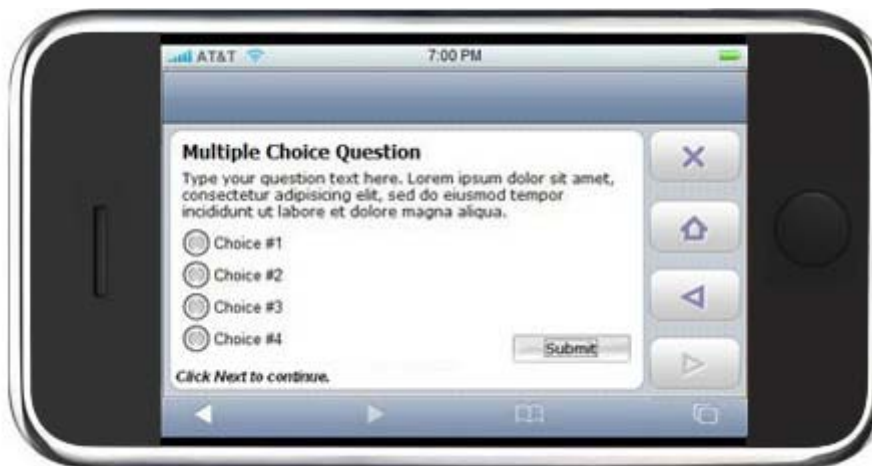
What are the obstacles?

To begin with, quantity is not quality. Sure, we have many cell phone users—but we also have too many kinds of cell phones. Screen sizes vary, color schemes vary, processing power varies. While some users—such as those with iPhones—are equipped to handle rich, interactive color content, others are still stuck with plain text. As such, **fragmentation** can pose a real obstacle to those developing mobile learning technology. In fact, there are **very few mobile content or application development tools** available at present. And in turn, that means **vendor-provided mobile LMS solutions are either non-existent or very immature.**

In addition to developmental challenges, mobile learning applications face a **strategic barrier within organizations.** Most businesses have interest and user demand, but they lack the understanding and practical strategy to make it happen.

What can you do?

1. **Get in the game.** Businesses who can offer learning management via mobile device will have an advantage over others who cannot, plain and simple. The key is to launch a smart, focused pilot initiative.
2. **Determine your initial area of concentration.** In your pilot, will you deliver learning content or process-related tools? Direct your focus toward achieving the greatest benefit for your specific audience.
3. **Identify the device fragmentation in your user base.** Figure out who is using which devices and how many of each are in play. Standardizing on a single PDA or cell phone technology across your organization will, of course, simplify your pilot project.
4. **Evaluate available technologies.** Take a look at what's out there, and learn all you can. When you know a vendor's capabilities, you can take greater ownership of the technology. Aim to work with a vendor that enables you to gain some independence. For example, some LMS providers expose features via Web services, so you can build your own functionality with ease (Fig. 1). **SumTotal also offers a new version of its ToolBook® content development tools that will allow companies to easily repurpose existing courseware for the iPhone.**



An example of ToolBook created content for Apple iPhone.

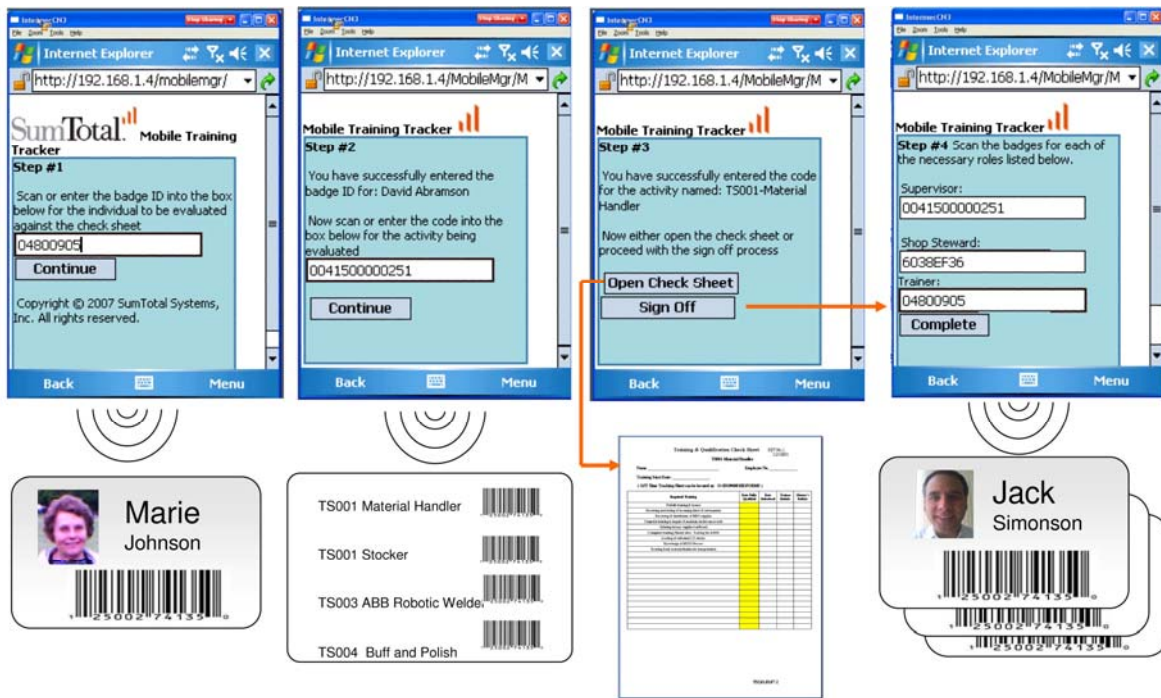


Figure 1: This application, built from a SumTotal LMS via Web services, lets a manager scan barcodes via mobile device to approve training completion.

5. **Take the “least common denominator” approach.** As the saying goes, you can’t please all the people all the time. If you’re dealing with a highly fragmented set of users, you’ll need to choose a technology that works across numerous devices, which might mean sacrificing more compelling content for simplified text interfaces. Don’t sweat it—some functionality will surely prove more beneficial than none at all. And with time, you can make adjustments.

Trend 2: Blended learning environments

As the name implies, a blended learning environment is one where an organization has wrapped different modalities of training—such as self-paced and instructor-led—into a combined program.

What’s driving the growth?

Most companies have come to realize that blended learning environments—by virtue of providing users with the diversity of style, pace, or content they crave—can be **more effective and engaging** than discrete ones. In addition, **certain types of learning simply demand a blended approach** in order to be efficient and successful. Take, for example, the concept of new hire training. Bringing new employees on board can involve both generic corporate training, which might be more conducive to a self-paced online course, as well as job-specific instruction, which might require one-on-one sessions with a teacher. As recognition of these ideas grows, **LMS technology is beginning to keep pace** in its ability to deliver blended approaches.

What are the obstacles?

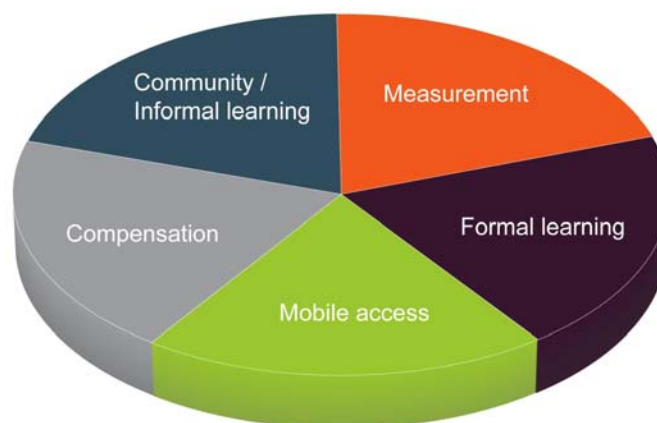
Just because LMS technology is maturing in this arena does not mean it is ready for prime time. And although organizations might have some blended learning tools on hand, or have substantial user demand, many **have not yet clearly defined the most appropriate blended programs** for their needs. Nor have they figured out how to track progress and completion across multiple learning modalities within a single program. How does an organization make a smooth transition from transitional methods of learning to a blended approach? The idea causes some companies to take pause, **unsure of the best way to migrate users** to new technology or new environments. Even when users clamor for change, they frequently hesitate when it finally happens.

What can you do?

1. **Develop a blended learning strategy.** What does “blended learning” mean to your organization? What would be your most beneficial components of a blended learning program, and who would your users be? How would you roll out the program?
2. **Evaluate your technology platform’s ability to manage and deliver blended learning.** Can your existing platform handle a blended approach efficiently? If you have doubts, are you prepared to look at new technology? Take serious note of the costs and challenges involved in bringing on a new platform, and be certain you are ready to follow through on the endeavor.
3. **Consider how the move to a blended approach will affect users.** Can you manage the change? Gauge your users’ comfort zone when it comes to switching technology, and craft a plan to streamline the transition without impacting user satisfaction.

Trend 3: Talent development suites

Talent development combines five key elements into a single, unified solution (Figure 3):



- Measuring employee performance and planning for succession
- Delivering learning that expands or fills gaps in performance or competency
- Offering community, content management, and informal learning capabilities

- Compensating people appropriately for their achievements
- Providing for delivery of information both online and offline via mobile and disconnected modes

What's driving the growth?

Integration has become a cross-industry buzzword. That's because many organizations have already learned **the value of centralizing** the management of diverse business functions to simplify administration, cut costs, and boost efficiency. Talent development, through its cyclical stages, seems to lend itself naturally to integration as a single, comprehensive solution. In fact, some companies have already found that **effectively centralizing talent development components through a common technology can build real competitive advantage**. Unified talent development suites can offer greater overall visibility into workforce capabilities, making it easier to fill skill gaps and identify avenues for continued growth and innovation.

Wondering where recruiting enters the picture? Don't. Demographic shifts and disappointing skills shortages are squeezing talent acquisition out of the equation. Many businesses are coming to realize that competency challenges can no longer be solved by the acquisition of new blood. Or, as one organizational leader stated, "I can't recruit my way out of this problem."

At the same time, **employees themselves are demanding that businesses establish more comprehensive talent development strategies**. The younger generation in particular is impressing upon companies how important it is to offer strategic pathways for growth. Employees want detailed plans for how a company will help them manage their careers long-term. In order to grow and retain the most talented individuals, then, companies are rapidly realizing the necessity of presenting an integrated approach to the employee lifecycle. And this demand has, in turn, spurred some vendors to quickly work on **rounding out their isolated talent offerings into full talent development suites**.

What are the obstacles?

While organizations see the value in integrating talent development, the reality is **that most were built to manage these categories separately**. Many have distinct departments with distinct groups of personnel for each component, and uniting them all efficiently can be extremely challenging. Additionally, each of these **separate departments might have made significant investments** over time in heterogeneous legacy systems. Simply casting those systems aside in favor of a new centralized talent development suite might not be feasible.

What can you do?

1. **Uncover your organization's current approach to talent development.** Is there a long-term talent development technology strategy already in play? If not, are you ready to create one?
2. **Determine who makes strategic decisions regarding technology.** Who manages the various talent development components and processes in your company? If no clear ownership exists, drive to build cross-functional participation between all related talent development departments. After all, talent development is not about learning, performance or compensation alone—it's really about managing an integrated lifecycle. Make sure all talent development departments are aware of each other and are willing to work together to build a more centralized perspective.

3. **Evaluate leading talent development vendors to find the broadest functional fit.** Because talent development suites are still largely under construction, avoid looking for the best-of-breed in all five components. Instead, seek out a vendor who meets your functional requirements across the broadest possible spectrum. It's easier in the long run to work with a single vendor to build out a comprehensive solution than it is to attempt expanding on non-integrated applications from separate vendors.
4. **Deploy solutions in a phased manner.** Talent development is complex, involving a number of people and processes. Don't overextend your resources by tackling all areas at once—you could disrupt too much too quickly. If you find an integrated talent development suite that will work for your organization, roll it out in phases so you can minimize change for your users and across the business.

Trend 4: Integration of Web 2.0 technologies

The first generation of Web technology was about pushing information to passive users. Today's Web 2.0 technologies take a vastly different approach. They enable users to build and share their own content within interactive discussion groups, forums, wikis, and blogs. In short, Web 2.0 is about helping users participate more actively in their own online experiences—and more companies are expressing interest in integrating these types of capabilities into the learning management field for what has become known as “informal learning.”

What's driving the growth?

This is an area where users rule. Today's Web-savvy **employees have already grown accustomed to online community experiences** and to participating with other users in a variety of online structures. They no longer want to sit passively and receive data; they want interaction. Why? Because, in many cases, users have vital knowledge to share—and they know others have knowledge they're seeking. Naturally, **organizations are beginning to recognize how much value exists in this tacit knowledge**, especially when it belongs to their own employees. They understand that the use of Web 2.0 technologies can help them unlock that value.

Likewise, they are accepting that the ability to share and leverage information online is **blurring the once-prominent lines between formal and informal knowledge**. Today's employees no longer find it acceptable to go hunting for information in different places; instead, they want a single repository of corporate knowledge. And they want learning programs that provide this type of integrated, interactive approach to delivering content.

What are the obstacles?

Despite recognizing the promise of Web 2.0, **many organizations remain unclear on how to fit these new technologies into an overall learning strategy**. They see the user demand, but they haven't yet delved into that demand to see how it can provide measurable business value. That's probably because **it's difficult to gauge the return on investment in Web 2.0 technologies**. For example, how do you obtain before and after metrics on the success of a blog? How do you even identify the many ways in which the information that blog provides might positively impact readers and responders?

Another limit to overcome is **high user expectation**. So many people are now accustomed to using popular community applications like MySpace and Facebook that they simply expect similar capabilities from any system that claims interactivity. **Many of today's LMS solutions,**

however, aren't ready to offer the Web 2.0 technologies users want to see, and disappointment could cause backlash.

What can you do?

1. **Know your user audience and culture.** Will they really leverage Web 2.0 technologies? Without the right user base, your efforts might wither on the vine.
2. **Set clear goals for your Web 2.0 technology deployment.** Know ahead of time what you expect to achieve. If quantitative ROI is hard to assess, you'll need a defined list of objectives so you can measure progress and prove your deployment's worth.
3. **Identify the specific technologies that will provide benefit.** Which Web 2.0 technologies will best serve your users and your goals? Do you need discussion forums? Communities of practice? Wikis? Learn what's available and how it all works.
4. **Start small.** For pilot purposes, you might consider integrating inexpensive, readily available technologies. See if they will be sufficient to meet your pilot's needs, so you can avoid heavier up-front expenses and take the time you need to evaluate solutions.

Trend 5: Immersive technologies

Immersive technologies create simulated worlds, where users can be completely submerged in a particular environment. These simulations are far more detailed than those previously incorporated in learning technology. Rather than simply walking a user through a scenario from a distance, immersive technologies enable real-time, user-to-user interaction within a virtual reality—as in Second Life, an online world where users take on avatars and interact with each other in a completely simulated environment.

What's driving the growth?

Just a few years ago, the ability to create and deploy simulation technology was both limited and expensive. Today, however, the **development tools are maturing and becoming much more affordable**. And the change is showing. In a recent survey by the eLearning Guild, over 70% of respondents indicated that they plan to do more simple simulations within the next year, and 35% plan to do more immersive learning simulations².

Additionally, as more companies begin to test these technologies, they are coming to realize that **immersive learning simulations can be extremely effective for skills practice**. In the same survey from the eLearning Guild, an overwhelming 95% of those respondents that had already implemented immersive simulations agreed that they offered a "somewhat better" or "much better" learning environment than that provided by other forms of rich skill practice³.

And of course there are the **users**. The more they become accustomed to experiencing the capabilities of immersive environments through venues like Second Life or through virtual gaming, the more they expect to see that level of functionality in their work environments as well.

² "Immersive Learning Simulations," eLearning Guild.

³ "Immersive Learning Simulations," eLearning Guild.

What are the obstacles?

Although price points are declining and development is improving, **immersive learning environments can still be costly and time-consuming to create**. Similarly, they can be **more difficult to deploy** given their intensive hardware and software demands. And while some users are chomping at the bit to access learning systems through these types of technologies, others are nowhere near ready—and might never be. **Immersive environments, more than other technologies, seem to reveal noticeable generation gaps** among users. Some older users, for example, might not understand the reasoning or effectiveness behind an immersive simulation versus a more traditional environment.

What can you do?

1. **Determine if your audience and culture will accept immersive learning environments.** The outcome might depend on your user demographics or your specific industry.
2. **Identify which learning programs are best suited to immersive learning techniques—and which aren't.** For example, your software training might be more effective in an immersive environment, while your corporate ethics course could prove too chaotic in a simulated world.
3. **Evaluate potential partners and immersive technologies available in the market.** Take the time to learn details. What are the infrastructure requirements? What is the up-front investment required? Will the technology meet the needs of your specific users?
4. **Watch an example in action.** SumTotal Systems customer United Parcel Service (UPS) is featured in an ABC news video segment, demonstrating an immersive and blended learning approach that helps train a new generation of drivers. See the video at <http://abcnews.go.com/Video/playerIndex?id=4010112>

While no one can guarantee that these emerging technologies will become widely accepted, the trends are clear. User demand for change in learning management continues to push the field into new technology territory. By following these trends and educating your organization on their potential gains and pitfalls, you can ensure your business will be well positioned to realize their full potential when the timing is right.

To learn more about how SumTotal can work with you to help strengthen business performance, please visit our Web site at www.sumtotalsystems.com

For more information on mobile learning visit www.toolbook.com/mobile

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