



Technology's Role in L&D

Creating a roadmap
to balance the training
technology needs of today
with the innovations
of tomorrow.

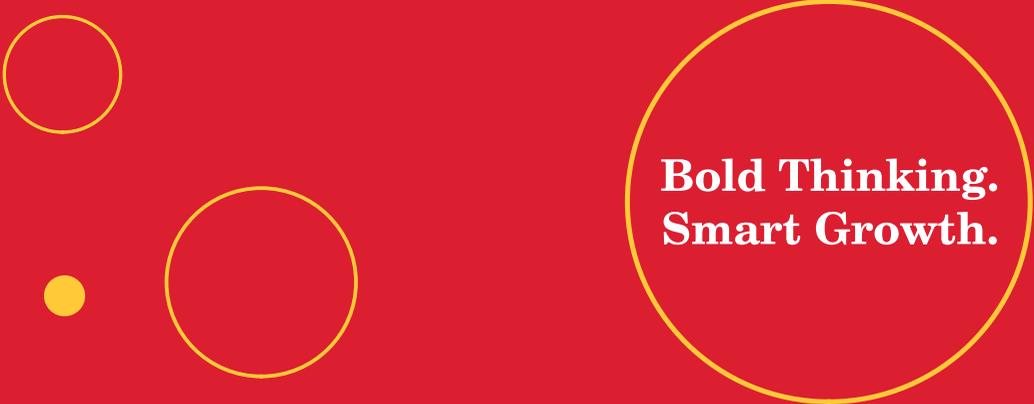
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Technology's Role in L&D

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BY THE TRAINING TOP 10 HALL OF FAME

Choosing the best technology to deliver learning solutions challenges every training organization, regardless of size or experience. It's easy to become stymied by legacy systems or diverted by the latest bells and whistles, especially when business leaders have a keen desire to try the newest technologies.

We among the Training Top 10 Hall of Fame organizations are struggling with this, too. We're learning, though, and know it is critical to continue to focus on aligning learning strategy, content, and supporting technology with business results and needs. When we do that, learners win every time.

In this white paper, we look at Training Top 10 Hall of Famers' learning and development (L&D) technology best practices and what we're still learning. These lessons can be applied in any organization, regardless of size or industry.

BEST PRACTICE:

Create an L&D Technology Strategy and Roadmap

It's important to first assess the L&D strategy (for formal and informal methods) and the desired learner experience, as a basis for the L&D technology strategy and subsequent roadmap that will be created. Any decisions on technology need to be made against this.

Regardless of the technology used to deliver content, L&D leaders must focus on the learning. If, for example, business leaders insist on mobile learning, L&D must ask whether it fits the organization's business model, if the content being delivered is appropriate for this delivery type, whether it meets all risk

and security requirements, etc. When remote voting became the new "must-have" technology, training professionals had to ask whether voting supported the learning objective of classes where it could be deployed. When technology doesn't support the learning objectives, it is merely a high-tech distraction.

Information technology (IT) professionals typically vet projects through the Information Technology Infrastructure Library (ITIL) framework. This decision framework aligns IT services with business needs. Afterward, Agile project management methodology should be used. Agile delivers small sections of the project incrementally, helping to ensure results meet or exceed expectations. These two frameworks are being used throughout organizations to identify the root of a problem, design an effective solution, and test that solution during development to ensure that it does, in fact, meet the organization's needs.

That means learning strategies and solutions—and, in turn, learning technologies—should be determined not just with learning objectives in mind, but with performance objectives, too. What technology will best drive performance (and learning)? And how will business units and/or L&D measure behavior change and business outcomes resulting from the training?

BEST PRACTICE:

Resist the Shiny Objects

For many, the latest or trending technology is like a siren song, enticing them with new features, bells, and whistles that may not align with or positively affect the desired training outcome. Hearing this song without

succumbing to it is one of L&D's biggest challenges, particularly when clients and colleagues join the chorus.

With so many new technologies being introduced, organizations are inundated with chatter from vendors, clients, and colleagues. Yet no single technology, no matter how attractive, is ideal for every situation. Instead, L&D must select the solution or blend of solutions to best address a variety of considerations, including learning content and performance objectives, varying infrastructure capabilities, and the learner preferences of their user base.

For organizations with global operations, don't assume developing economies have less sophisticated infrastructure than the U.S. Although advanced nations generally do have greater connectivity than developing economies, 17 percent of Americans lack advanced broadband (defined as download speeds of 25 Mbps), according to the February 2016 McKinsey & Company report, *Digital Globalization: The New Era of Global Flows*. In rural areas, that number skyrockets to more than 50 percent, and even cell phone reception may be inconsistent. That poor coverage affects the type of training materials remote employees can access easily.

Local CIO implementations also differ. For example, Web portals that are accessible in one location—regional headquarters, for example—may be inaccessible in field offices or from personal devices because of firewalls or other IT protocols.

Additionally, national laws governing data privacy and the Internet itself can affect how training materials are delivered. It's not unusual for regulatory hurdles outside the U.S. to be so strict that the best option is to build an in-country portal specifically for training or to host classes in person.

BEST PRACTICE:

Create an L&D Technology Steering Committee

To deal with these issues, as well as the choice of technology, several Hall of Fame companies have created internal steering committees to develop learning technology roadmaps. They typically include representatives from L&D, IT, Legal, and other key stakeholders, including the heads of training

organizations that deal with business units.

Their mission is to:

- Consider the current technology in the organization
- Determine what is needed
- Evaluate what is available in the marketplace
- Confirm compliance with security and risk requirements
- Decide what a given technology is expected to accomplish
- Learn whether it actually can meet those goals

Also important is establishing a governance model and processes for identifying needs, identifying and vetting vendor capabilities, and selecting a solution—all with a focus on the coordination across multiple stakeholder groups.

Learning technology steering committees help fill a vital gap in L&D knowledge. Too often, L&D professionals, though experts in learning and content development, have inadequate knowledge of learning technologies to make informed decisions when brainstorming solutions. To help address this, one Hall of Fame company works with its learning technology/R&D department to develop “talk books” for L&D leaders that enable them to have more informed answers—and the right questions to ask—at their fingertips when in discussions with their business leaders.

Much of the value of having technological expertise on the L&D team is in knowing what *not* to do. This minimizes costly mistakes caused by such things as interoperability issues, out-of-date technologies that don't meet the organization's objectives, duplicative technologies being deployed, and lack of security compliance.

In parallel, IT leaders often don't have the L&D perspective to be able to make properly informed decisions. Since this is about implementing an impactful learning experience that uses technology—and not just implementing technology—it's important that the task force brings the L&D and IT sides together.

Ultimately, steering committees aim to ensure that L&D solutions are aligned with the technological direction and infrastructure of the broader organization.

TECHNOLOGY'S ROLE IN L&D

As steering committees delve into technology options, they may find that technology isn't the right solution at all when applied to the L&D strategy, desired learner experience, and how content and learning preferences and restrictions drive delivery method. Or they may find that the newest, most innovative technology doesn't always yield the most effective learning solution. Tried-and-true options often can deliver content more effectively than more elaborate solutions. Chat, for example, is powerful, but it's not sexy. However, once people realize they can use it to create subject matter expertise groups and real-time

peer-to-peer support, they see it's a valuable tool.

One technically savvy Hall of Famer still uses the original Training Partner system. Its engineers know the application thoroughly and put SQL-based programming atop it, hosting applications in-house rather than in the cloud.

Lynda.com is another low-cost option that can be deployed on virtually any platform. Using it for learning, one Hall of Fame company says its 1,000 employees have watched more than 60,000 hours of content in the last eight months. (See sidebar on p. 8 for more on delivery modalities.)

Building the Next-Generation L&D Team

Learning and Development (L&D) is changing rapidly, and the competencies required today aren't the same as those needed even a decade ago, especially with all of the new learning modalities available today.

We're seeing the skills needed for the next-generation L&D professional evolving from design, development, and delivery expertise to include performance consulting capabilities, knowledge of the business, and an ability to employ innovative learning for impact (which includes L&D technology)—all of which also require a willingness to change and innovate. A combination of those skills results in a robust L&D team whose members complement each other and can work together to successfully devise the L&D technology strategy and roadmap. With that in mind, here are several competencies Training Top 10 Hall of Fame L&D professionals now expect in their teams:

Business Acumen:

- Agile training
- Project management skills
- Knowledge of the core business and its drivers
- Comfort with technology
- A global outlook
- A consultancy mindset to question, listen, and problem solve
- An entrepreneurial approach

- Business analytics skills to understand the metrics behind solutions
- Communications change management expertise

Soft Skills:

- Curiosity
- Innovation
- Collaborative nature
- Facilitation skills, virtually and in person, and with diverse stakeholders

Technical skills:

- A systems approach to technology
 - Video shooting and editing
 - Instructional design
 - Scripting
 - User experience/user interface design expertise
 - Graphic design
 - Mobile app development
 - Gamification
 - Curation: Taxonomy and meta-tagging acumen
- Significant value also comes from non-traditional hires. Realizing this, Hall of Fame organizations are hiring job candidates from a wider variety of backgrounds. For example, actors, disc jockeys, psychologists, social workers, and communications experts are succeeding in L&D alongside long-time Learning professionals, providing specialized expertise and fields of knowledge not traditionally found in L&D.

BEST PRACTICE:

Understand the Risks

Like most new technology, learning technology comes with potential risks, which L&D needs to assess and plan for. Some of the most innovative training technology often is developed by small vendors that can't scale to meet the needs of large global organizations. They often lack the infrastructure to ensure regulatory compliance, meet insurance requirements, or provide international support. In addition, before a technology can be deployed for global training, it also must meet any export control regulations and local privacy laws, such as where servers must reside.

Ensuring reasonable business continuity for these small training product innovators is another concern. In an industry known for short product lifecycles and rapid acquisitions, there's no assurance the company will exist in a few years.

One Hall of Fame company tries to counter concerns about scale, insurance, and global support by putting the risk in context. It argues that having the same contracting standards for everything is unnecessary, that a small, low-cost deployment needn't meet the same requirements as an expensive, enterprise-wide implementation. Alternatively, technology brokers can help reduce risk by providing the infrastructure that many small companies lack.

Another risk arises from the consumerization of IT and the bring-your-own-device (BYOD) trend in which employees produce their own training material with a smart phone that a decade ago could only be created in a studio. Employee-made videos have become learning support tools, both before and after classes. Millennials find them particularly appealing, and their test scores often improve a few percentage points as a result.

But such training creation and delivery does increase the risk of factual errors. Consequently, employee-made tutorials for high-risk areas such as law often are banned. Lower-risk areas such as technical topics may be better suited for employee-made tutorials.

In terms of risk reduction, L&D leaders also must embrace the concept of fast failure. The notion is that risk is inherent and some projects will fail, so it's better for them to fail early before time and money are

lavished on them. In practical terms, this encourages teams to try new technologies and approaches, and if they fail, to move on without investing undue time and resources trying to force something to work.

That concept also asks leaders to embrace change—even at the last minute. For example, one major technology organization selected its new delivery platform to train managers for the rollout of a new performance management system. Two days before delivery, it had to choose and deploy a different system. This ability to adapt quickly increases the chances of success.

While accepting risk is a hallmark of Hall of Fame companies, it must be their risk to accept. That requires ensuring their business partners understand any risk and also accept it. When talking with business unit partners, for example, first clarify a business problem and identify the solution before introducing a technology that may solve it. If that approach or technology is new to the company, explain that, too. By being honest about the risk initially, partners can make informed decisions. In the process, this enhances L&D credibility and bolsters partnerships—and is all the more reason to include a Legal/Risk representative on the steering committee.

BEST PRACTICE:

Create an L&D Team with a Technology Perspective and Skills

As often as technology is viewed as the solution, it's also blamed for failures—often undeservedly. Classroom training can't simply be ported to digital without addressing needed content or format changes. But designers often aren't familiar enough with the technology to discuss options knowledgeably.

This is a current challenge in our industry to ensure that instructional designers are educated in the various delivery technologies available to them today. It is incumbent upon them to ensure they have the knowledge and expertise to recommend the right delivery solutions to their clients based on the goals and objectives of the learning activity. It is especially challenging with new technologies evolving every day.

L&D's goal shouldn't be to know the technology or even the business as well as subject matter experts.

They aren't expected to be able to write code, for example, but they should become familiar enough with other areas of the business to discuss their business drivers. Likewise, they should be familiar enough with the new technologies to discuss their strengths and weaknesses in particular situations.

To increase technological acumen, send technologically knowledgeable people to client meetings with those less knowledgeable. That enhances L&D's credibility, educates and informs clients, and results in the right solutions being leveraged. Depending on the size and need within the L&D organization, this skill can be expanded upon by hiring individuals who are more technologically savvy than prior employees as natural attrition occurs. Each new L&D member won't have all the needed skills or experience. But by broadening the hiring criteria, they bring additional skills to build an agile, effective team. (See sidebar, "Building the Next-Generation L&D Team," on p. 6.)

Delivery Modalities Offer Various Benefits

Technology has changed—and continues to change—the way training is delivered and accessed. Organizations now have to determine when and how to employ different learning modalities—including in-person, virtual, and blended training—based on content and performance objectives, constraints and capabilities, and learner preferences.

Formal, in-person, instructor-led training, for example, is most valuable for networking, application of knowledge, collaboration and knowledge sharing, and access to instructors and subject matter expert coaching.

Virtual learning is ideal when the goal is simply to impart knowledge or to bring learning to remote sites. Live, online classes can help remote employees network within the organization. They also can help organizations make the most of difficult situations. When a major snowstorm disrupted scheduled live classroom soft skills training, one Hall of Fame company conducted the classes online, in modules designed by experienced producers and trainers. An ROI analysis

BEST PRACTICE: "Find the Front" Around L&D Technologies

Tools and information sources are changing rapidly. Information sources such as Medium now augment Harvard University research, and continuous, personalized learning technologies augment learning management systems. To stay current, Hall of Famers recommend reading the industry magazines, attending industry events, and occasionally inviting cutting-edge vendors to present their technology.

Assigning an intern to survey the technology landscape each year is another way to identify the newest, most innovative products in both the learning and education markets. Assigning the task to an intern has the benefit of not just identifying the technology, but determining what wows a young, tech-savvy generation of employees. (As we all know, they're hard to impress.) Some solutions they uncover may work across the

afterward found employees actually learned more with this solution because the information was delivered in shorter segments that answered immediate needs and enhanced retention.

Another benefit of virtual learning is that common questions can be addressed organically in the material without slowing the presentation pace. One Hall of Fame organization condensed a 45-minute classroom session into a 12-minute video that addressed key points.

Virtual learners also can ask questions of experts on an on-demand, as-needed basis. And virtual peer-to-peer learning can be highly effective, especially when peers can chat and share PowerPoint slides and videos. The underlying technology should be able to bridge a conference call and make the content accessible to those with disabilities.

One international company hosts three or four online classes per month, each led by one of its 50 best managers throughout the world. Between 600 and 1,000 employees participate at once in what, essentially, is a MOOC (massive open online course). L&D leaders say the biggest benefit is the Chat

enterprise, while others are ideal for niche products. Ensure, however, that technology is chosen because it may solve specific challenges rather than because it's cool.

Crowdsourcing is effective for learning, as well as fundraising. For example, one Hall of Fame company piloted Waggl. It lets users ask a question, accumulates answers, and automatically ranks those answers by popularity. When asking which career development opportunities would be most meaningful in the next year, the company received more than 300 responses. Some 5,000 employees voted on the responses that best reflected their own views, and Waggl filtered the answers with the most votes to the top of the list. The next question, for stakeholders, is whether this technology provides value.

For on-the-fly training, a major hotel uses Kryon Systems' Leo Performance Assurance solution to train desk clerks, placing the proactive help tool atop the normal check-in application to guide users through the

procedure. It pops up when users seem to need help. It has trained desk clerks, call center operators, retail sales personnel, and others successfully in the actual business environment.

For online video training, one Hall of Fame company developed a \$30,000 pilot and made it accessible via Lynda.com to determine whether employees would use video as a learning tool and where it could be most effective. That was easier and less costly than investing in a massive open online course, for example.

Consumer technology also can be used to create digital content to be posted online, with great success. Some Hall of Fame companies encourage employees to create podcasts using their smartphones. One 30-year construction industry veteran taped concrete pours, sharing best practices in a less-than-five-minute video.

Realizing the capabilities of consumer technology, another Hall of Fame organization created a small studio to produce quality videos within 24 hours. The investment

portion, where participants share best practices. A variation on this program encourages experts at any level to create classes in their subjects themselves. The sessions are recorded so learners can reference them at their convenience.

That experience gave the organization the confidence to deploy a home-based call center agent. Consequently, its operators never enter a brick-and-mortar call center—not even for training—saving significant dollars.

As noted in the example above, digital solutions such as video offer excellent ways to capture institutional knowledge and to update information as conditions change. Some organizations record skill-building role-playing exercises for review by peers or managers. Results can be viewed at leaders' convenience and the most effective ones may be uploaded to YouTube or a company intranet.

Blended training melds the best of all options by utilizing multiple delivery modalities for a specific topic or sub-curriculum. For example, it may not be practical for international organizations to fly high-potential employees to executive leadership training

in the U.S. monthly, or for organizations to remove employees from the workplace for a solid week of intensive training. A blended training model might offer content delivered in one- to three-hour online modules during several months, followed by a two-day in-person workshop and coaching calls.

Case studies also present well in blended learning situations. One Hall of Fame company opens case studies like a news broadcast to outline the scenario. The presenter then asks, "What would *you* do?" Learners have three minutes to jot down their solutions. Then five reflection questions pop up, and participants write their responses. Finally, the presenter leads the class in a discussion of the issues and the tools available to reach the best resolution in that situation. It's like a "spring training" practice session that helps participants brush up on certain skills.

Ultimately, as the learning process becomes more democratic and new technologies emerge, Learning leaders may need to expand their knowledge of other fields. When the IT team, for example, hosts Chef training, it's not discussing culinary trends—it's discussing an IT automation tool.

was minimal. Now when experts are asked questions, they're encouraged to write the answer as a short script, walk into the studio, and film the response. Those short videos capture institutional knowledge and are used as prep work before classes, as well as refreshers learners may watch as needed.

Other Hall of Fame organizations use Microsoft's Sway, an interactive storytelling app, to set expectations for classes or specify knowledge learners should have before particular classes. By knowing what to expect, employees can determine whether the class is right for them and, thus, maximize their productivity.

BEST PRACTICE:

Carefully Think Through Build vs. Buy Considerations

Many organizations wrestle with the question of whether it's better to build or buy learning technology. The answer depends on your organization's technical expertise, goals, and resources. There's no single best answer.

Learning system design increasingly is becoming a joint effort among the organization's knowledge management, learning technology, and internal systems groups. The data center, often called enterprise IT, typically isn't involved in design. But because it is involved with networking, cloud computing, and storage, it may be a factor in implementation, resource allocation, and deployment.

Whether the solution is built internally, outsourced, or purchased, it should be a part of the organization's learning portal. Some Hall of Fame companies locate this portal within the enterprise-wide portal to minimize workflow disruptions. The benefit is that employees can access the information they need with minimal clicks, regardless of what application they are using. Searching the learning portal should be as intuitive as searching Google. Any notes users take also should be able to be saved to their own devices easily, as well as on the learning system itself.

Learning technology continues to catch up with offerings available to other business verticals and to consumers. As big data analysis is integrated into the learning environment, algorithms similar to those used by Amazon and other large retailers to make recommendations for user purchases are being adapted to the

learning environment. As they become commercialized, learning applications are able to make learning recommendations directly to learners based on the logical next steps, individual interests, or goals.

As technology becomes increasingly pervasive in learning, technology silos will decline and information will become more accessible from normal workflows (like word processing and call center applications). Information will be one—not three—clicks away. The integration and management of big data is integral to those capabilities, but big data analytics skills aren't necessarily rife among learning organizations and their vendors.

The immediate solution is to look beyond the usual vendors to build solutions that allow L&D applications to sit atop them so they can be updated and adjusted. Alternatively, L&D leaders may encourage traditional learning vendors to develop the big data analytics and machine learning algorithms to allow learning solutions to make individualized recommendations based on the learner's history.

Ultimately, the ideal learning systems will track individual learning and integrate it into personalized learning profiles that stay with individuals throughout their careers—even when they change companies.

The promise of technology is that it will enable the learning to belong to the individual. Today's learning management systems are warehouses of formal learning. They are struggling toward integration, but services, as yet, remain basic. Without broad integration, however, LMS systems may be overtaken by savvy, innovative technology companies willing to work with the L&D market.

Conclusion

Any learning opportunity, regardless of how it's delivered, must focus first and foremost on addressing a business need. Technology is merely a tool to aid in that process. Use it to create accessibility, to deliver content, and to reinforce learning. There are multiple options and multiple solutions for every issue. L&D's objective is to leverage the various technologies available to them to deliver relevant, valuable content in the most effective way to meet the objectives of the training solution—and the organization.

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