



Industry Study

The Four Stages of E-learning

A maturity model for online corporate training.

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Introduction

The term “e-learning” refers to the use of Internet technologies for delivery and management of training.

Today, most organizations understand the potential and have adopted e-learning for a variety of initiatives and programs.

The market for Internet-enabled training and education has exploded in the last five years, reaching more than \$12 billion in products and services today. This research report, based on the results of 526 interviews with North American training and HR managers, reviews the corporate e-learning market in detail. It identifies a maturity model for e-learning: the three stages that organizations go through. For each stage, the study gives the reader guidelines for their implementations and where they are likely to be headed. It then describes the “fourth stage” – the coming new approaches which we believe are coming next.

The objectives of this paper are to:

- Describe the e-learning market, its size, and growth.
- Describe the three stages of corporate e-learning maturity to help buyers identify where they are and where they are going.
- Identify the key technology and usage trends that corporate training organizations should use in planning for new investments.
- Provide our perspectives on where the corporate e-learning marketplace is going.

The source of research for this paper was a broad-based survey for training managers in the spring of 2005, along with interviews with 12 different companies about training and e-learning strategies. Survey demographics are described in Appendix B.

The E-learning Market

Defining E-learning

As use of the Internet has become widespread and well understood, the definition of e-learning has changed. In our research, we define e-learning as any form of corporate training that uses Internet-based technology for delivery, management, and measurement.

Historically, corporate training managers always have looked for ways to reduce the cost and improve the scalability of training programs through technology. In the 1970s and 1980s, organizations used mainframe and interactive video approaches. In the 1980s and 1990s, PC-based CD-ROM content was the preferred approach. Since 1998 or so, however, Internet-based approaches clearly have become the dominant delivery method for creating fast, scalable, low cost training.

Today, there are two broad categories of Internet-based programs:

- **Self-study:** Web-based content that allows a learner to start and stop whenever they want, enabling the learner to learn “on-demand.” This usually is called asynchronous training because it is not synchronized with an instructor or another learner.
- **Live:** Live Web-based programs use virtual classroom technology from vendors such as Centra, Interwise, WebEx, Microsoft, SkillSoft, NETg, and others to create an online experience which is instructor-led. These synchronous programs require a student to attend an online event and attempt to replicate and enhance a classroom experience.

Within these two broad categories there are many types of content and delivery technologies. Self-study programs include Web-based courseware, online books and references, online documents, assessments, simulations, videos, collaboration systems, blogs, and more to come. Live programs typically include Webcasts (large broadcast events), online labs, mentoring sessions, and virtual classroom events. Live technology has evolved very quickly in the last 12-18 months and, today, an instructor can teach, look over a student’s shoulder, and turn control over to an instructor to test and coach a learner.

Market Size and Growth

The corporate e-learning market is growing rapidly. The following chart, which is taken from our Enterprise Learning Market Research¹, shows the overall U.S. market penetration by delivery method. These average numbers do not show how the market is widely fragmented. In many industries and geographies, the penetration is very small, while in other industries, the penetration is much larger. High technology, telecommunications, and professional services firms, for example, are experienced adopters of online training. Utilities, insurance, and retail organizations have much lower adoption rates.

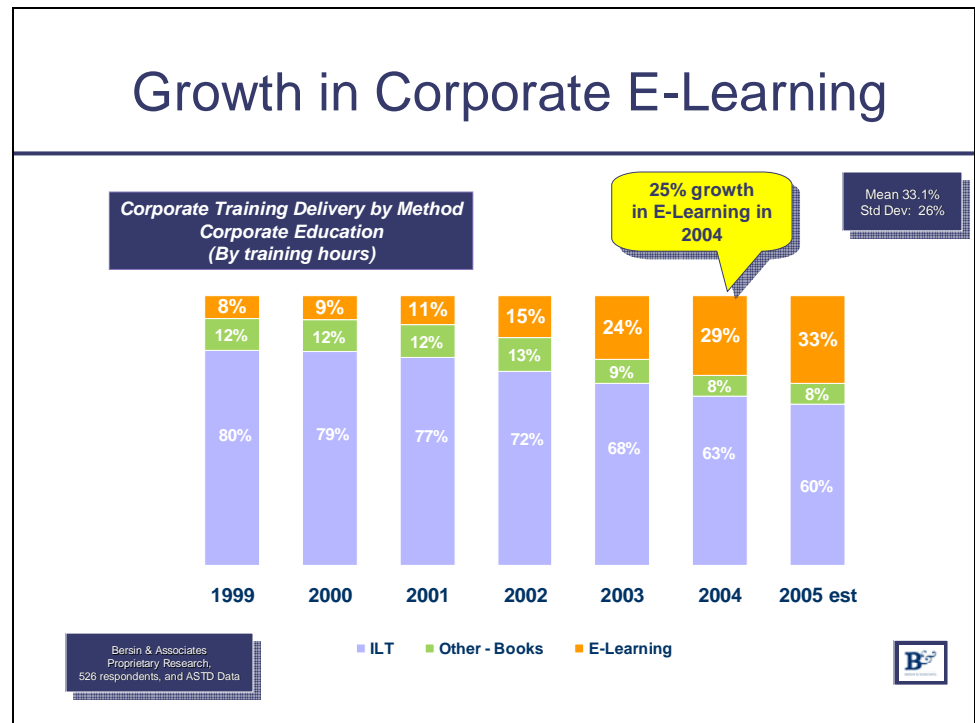


Figure 1: E-learning Market Growth by Delivery Method

As this report will point out, each organization goes through three stages of evolution to reach the “current nirvana” of e-learning, which in itself is a moving target. Clearly, however, this marketplace is growing very quickly (25% in 2004) and still undergoing much change. As Figure 2 shows, there is some slowing of growth in general but many segments still are growing significantly.

As we explain in the next section of the report, there are some companies who actually have over-saturated their e-learning audiences and are pulling back. This is a small number of

¹ Bersin & Associates' *Enterprise Learning Market Size and Forecast* is available to research members at <http://www.elearningresearch.com>.

Accenture is an organization that adopted online training early. The company has had extensive experience in the use and development of simulations and online IT training programs.

Today, Accenture has found that despite the rapid growth and potential for online training, classrooms are coming back. The company is starting to reinvest in traditional programs, blended with online activities, to drive IT mastery.

organizations, however, and we will explain why this takes place and what this means for buyers. Although some e-learning programs do fail, it now is easy for organizations to adopt and deploy e-learning programs that have very high returns on investment. The saturation effect is part of the evolution and we will explain how to avoid ending up with too much e-learning and not enough users.

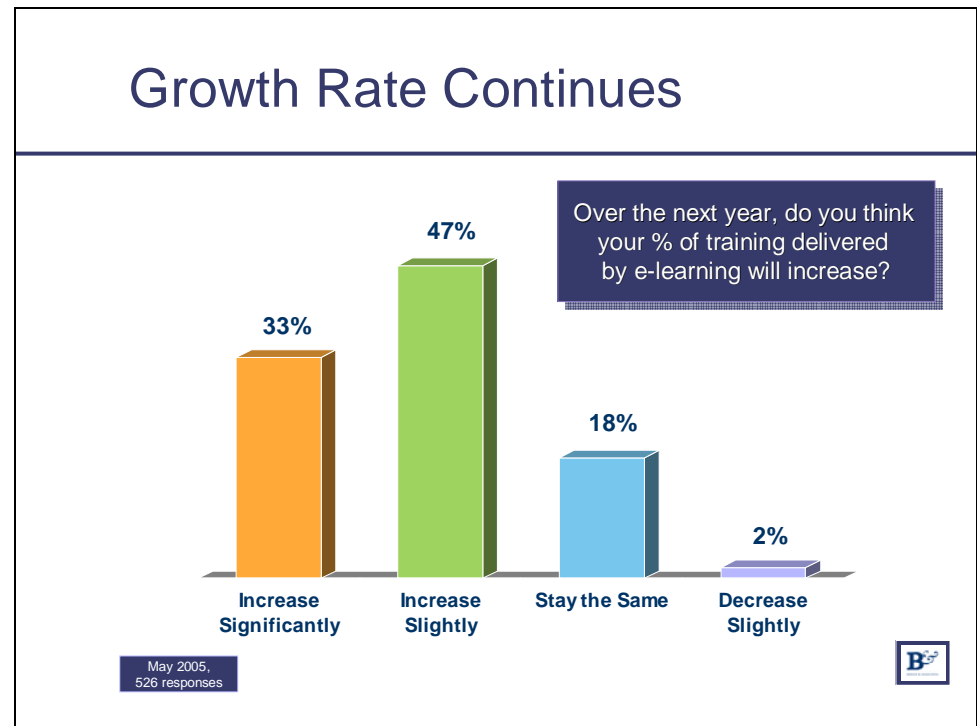


Figure 2: Market Growth Continues

We believe the e-learning market still is in its infancy: organizations are still identifying new approaches and new technologies and realizing that approaches that appeared to work a few years ago did not pan out as expected.

E-learning Market Segments

Within the market, there are three broadly defined elements to the market: content, technology, and services. Every corporate training organization has to deal with all three. Industry standards, such as SCORM and AICC,² have attempted to separate the architecture of content (the learning materials themselves) from the platform (the delivery and management system.) However, these standards are not widely implemented in a uniform way so every corporate training organization must deal with the issues of content, technology, and services as three inter-related problems.

² Sharable Content Object Reference Model and Aviation Industry CBT Committee

Content and Content Providers: Catalog vs. Custom

There are two forms of training content in the e-learning market:

- **Catalog, or off-the-shelf:** These are programs and materials that are developed by third-party providers (SkillSoft, NETg, ElementK, Microsoft, Oracle, and hundreds of other companies).
- **Custom:** Programs developed by a company for its internal own use. Custom programs are often developed internally and sometimes by third-party consultants.

The catalog content providers defined and created the e-learning market. In the 1990s, companies like SkillSoft, SmartForce, NETg, and DigitalThink created exciting, innovative online content for IT and technical training that demonstrated and proved the value of online training. Today, the catalog content market has become very large (more than \$1 billion in size) and forms the foundation of any corporate e-learning strategy.

The biggest shifts that have taken place in the catalog market are:

- The evolution of catalog content from purely IT and technical training to more soft skills, management training, and vertical and horizontal topics (e.g., Healthcare, manufacturing, compliance and safety, HR, accounting). As the big players have gotten bigger, there are now hundreds of small providers of specialized off-the-shelf content.
- Emergence and explosive growth of online books and reference materials to supplement and complement online training. The biggest player in this fast-growing market today is Books24x7, a division of Skillsoft.
- The ability for the largest catalog providers (e.g., SkillSoft and NETg) to provide an integrated solution that includes a content catalog along with an integrated platform. These platforms enable organizations to manage, launch, track, and report on catalog content and form the basis of a learning management system solution for many organizations. The largest players (Skillsoft, NETg, and ElementK) have very sophisticated platforms and embedded development tools.

As the large players have grown and consolidated (SkillSoft is #1 with Thomson NETg #2), hundreds of smaller companies have entered the market with high quality, specialized content that focuses on specific company needs. The growth in the e-learning market has enabled a huge cottage industry of content providers to grow, giving corporate buyers many options to buy instead of build high quality online programs.

Learning Management Systems and Infrastructure

Unfortunately for corporate training organizations, there is a lot of underlying technology required to manage online learning programs. The Learning Management Systems (LMS) market, which is more than \$450m in size today, continues to grow and evolve and, as we describe in this report, becomes a critical part of “stage 2” implementations. Other infrastructure, which has become important in the e-learning market, includes development tools (there are dozens and dozens), content management systems (LCMS), measurement systems, assessment tools, simulation tools, and general Web server technologies.

We segment the LMS market into four categories:

- **Global Enterprise:** Software systems designed for global enterprises, with domain management, multi-language support, distributed administration, and the scalability to handle tens of thousands of learners.
- **Enterprise:** Software systems designed for tens of thousands of users but typically run in a single language with limited distributed administration.
- **Mid-market:** Systems, designed for small- and medium-sized organizations, that are easy to install, easy to use, and low cost to implement. These systems often are hosted externally and include integrated development tools to help organizations build and publish content.
- **Specialized Solutions:** Many content providers and consulting firms have full function LMS systems. Systems such as SkillsSoft’s SkillPort, NETg KnowledgeNow, and other content provider systems are included here.

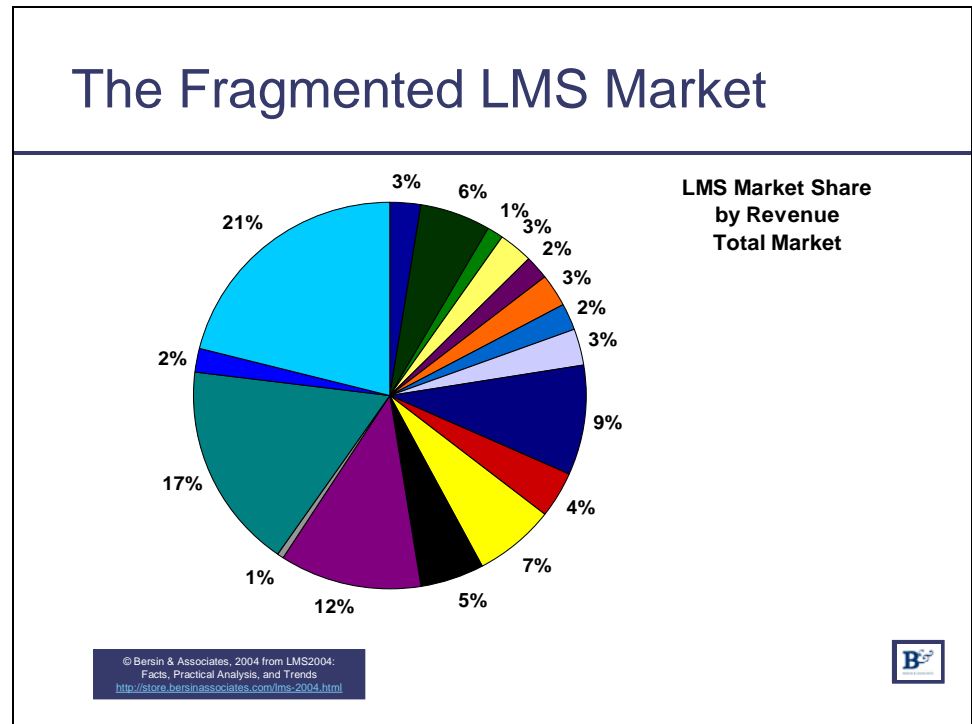


Figure 3: LMS Market Fragmentation

Since e-learning essentially is a specialized application of general Internet technologies (HTML, HTTP, Flash, databases, etc.), as organizations evolve into e-learning they find that the e-learning systems require as much or more care and feeding as other corporate applications. In fact, the third stage we describe, Stage 3, focuses heavily on the integration of e-learning programs into enterprise applications infrastructure.

For more details on the LMS market, please review our LMS research, available at <http://store.bersinassociates.com>.

Content Development Tools and Systems

One of the evolutions that companies go through is the transition from buy to build. Organizations new to e-learning often start with an off-the-shelf catalog. Quickly they realize, however, that there are many demands that cannot be met by a packaged solution so, in Stage 2, they start developing their own content.

Our research finds that more than 30% of corporate training organizations now build some of their own content. How do they do this? They rely on a wide variety of tools and content development systems.

This segment of the e-learning market, the tools segment, is more than \$280 million in size and growing at 15% per year. Tools available fall into several major categories:

- Rapid e-learning tools (discussed in the next section)
- Traditional courseware development tools
- General purpose Web development tools
- Software application simulation tools
- General purpose business simulation tools
- Microsoft Office tools
- Professional Web developer tools

There are more than 100 such tools on the market, with the largest market share going to companies like Articulate, Macromedia, Microsoft, OutStart, Trivantis, and SumTotal. A significant part of the development tools market is the use of live Webcasting tools, such as Centra, Interwise, Microsoft Live Meeting, and WebEx. Although most companies have access to such live systems already, their use as a regular part of training is still growing very rapidly – typically incorporated into blended programs (discussed below).

Emergence of Rapid E-learning

Over the last 18-24 months, one of the biggest changes in this market is the emergence of a segment we call rapid e-learning. We coined this term in 2003 and now it is widely used by a variety of tools and solution providers.

Rapid e-learning is a revolutionary step in corporate training and communications: it empowers subject matter experts (trainers, product managers, sales managers, executives, engineers, etc.) to build their own instructional content easily and publish it online. It is both an easy way to get started as well as a step in the evolutionary process. For more details on this segment, please read, *Rapid E-Learning: What Works*³, our detailed research report on this marketplace.

³ *Rapid E-Learning: What Works*TM is available to research members or for purchase at <http://store.bersinassociates.com/relstudy-2005.html> .

Rapid e-learning tools serve two purposes. First, they enable advanced training organizations to segment their programs and empower SMEs to build informational content easily.

Second, they enable organizations, which are new to online training, to quickly and easily develop content and learn how e-learning can impact their organization at low cost and low risk.

Drivers for Rapid E-Learning

“What is the biggest challenge you face in content development?”

#1 Problem:

It takes too long to build courses.

#2 Problem:

It is too hard to work with SME's.



Figure 4: Drivers for Rapid E-learning

Rapid e-learning practices enable subject matter experts to take their own material (usually in PowerPoint) and create online courseware easily. These tools have two components: first, some type of desktop software that converts PowerPoint slides or templates into Flash (a ubiquitous Web technology); second, a server component (a mini-LMS that enables these programs to be stored, launched, tracked, and reported).

The explosion of rapid e-learning tools and approaches has helped many organizations adopt e-learning quickly and easily, expanding the market. As we describe in the following section of this report, rapid e-learning has expanded the number of Stage 1 organizations and is an indicator of a Stage 2 organization.

We estimate that this new approach is growing at 30% or more per year, with new tools and solutions being launched every quarter.

Important Role of Blended Learning

As the number of tools and options for e-learning expands, companies now realize that online learning is not for everything and everyone. Just as e-commerce did not replace the need for bricks and mortar retail stores, e-learning does not replace the need for instructor-led training, coaching, expert support, labs, and collaborative experiences.

The term blended learning has been widely adopted – indicating the desire to blend online learning with classroom, coaching, labs, and

Wells Fargo has been using technology-based training for IT employees since 1997. Today, the company has more than 2,000 titles available.

For high potential IT employees, the company has a Masters program that blends online prerequisites with classroom training, projects, mentoring, and advanced assessments. Advanced instructors are flown in from all over the world.

other real world experiences. Our research has found that blended learning now is a mainstream approach for all Stage 2 companies. After experimenting with rapid e-learning and other forms of Web-based content, companies typically find that all instructor-led training can be complemented and extended with online materials.

The most frequent use of blended learning is for:

- Management and Leadership Training
- New Hire Training
- Soft skills (team-building, management, coaching)
- “Mastery” programs

What is a mastery program? In all training organizations, there is training needs that range in instructional demands.

To help organizations understand when to use blended approaches and other media types, we have developed a taxonomy called “The Four Categories of E-Learning.” They are described in Figure 5 below and further in “The Blended Learning Book”.⁴

⁴ For a detailed discussion of the four types of training, please see, *The Blended Learning Book*, by Josh Bersin, available at http://www.bersein.com/research/blended_book.asp.

Four Categories of E-Learning

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Category	Example	What Learner will Do	Tracking	Tools
1. Information Broadcast	"There is a new pricing model being announced and here it is."	Read	None	Email, PowerPoint, Conf Calls, Rapid E-Learning
2. Critical Information Transfer	"Here is the new pricing model, how it works, and how it differs from the previous model."	Read, listen, and answer some questions.	Who took this? Did they receive it? Did they read and listen?	Rapid E-Learning Webcasting
3. New Skills and Competencies	"Learn how to price complex products so you can become a pricing guru."	Read, listen, and try out new skills.	Did they really learn? What score did they get? Can they apply this information?	Courseware Simulations Blended Learning
4. Certified Skills and Proficiencies	"Become a certified pricing expert in the regional sales office, with authority to give discounts."	Read, Listen, try new skills, and become certified.	Did they pass? Are they certified? Can they apply material consistently? When were they certified? When do they expire?	Courseware, Assessments, Simulations, Manager Intervention, Blended Learning

Figure 5: *The Four Categories of E-learning*

Each business problem demands a different level of instructional focus. Some problems can be solved by distributing information (books, email, pamphlets, or slides). Others require strict classroom experiences, labs, and on-the-job training. These latter programs are what we call mastery programs. The goal of these programs is not just to educate, but to create mastery.

For these programs, a blended approach is mandatory.

As Figure 6 shows, 49% of training managers now consider blended learning a common approach. Of even more interest, 53% now use online reference materials and books as part of their blended programs. We believe that blending media and the use of online references have now become mainstream.

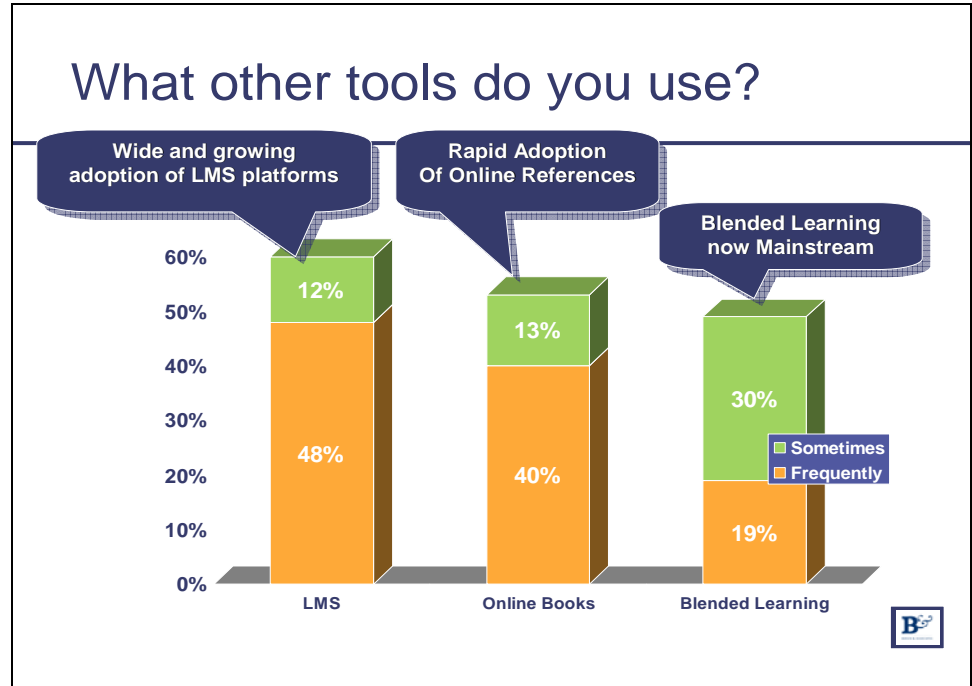


Figure 6: Adoption of LMS, Online Books, Blended Learning

How do organizations combine custom content (instructor led or self-study) with their catalog content? In this research we asked organizations how they blend off-the-shelf catalog content to build blended programs.

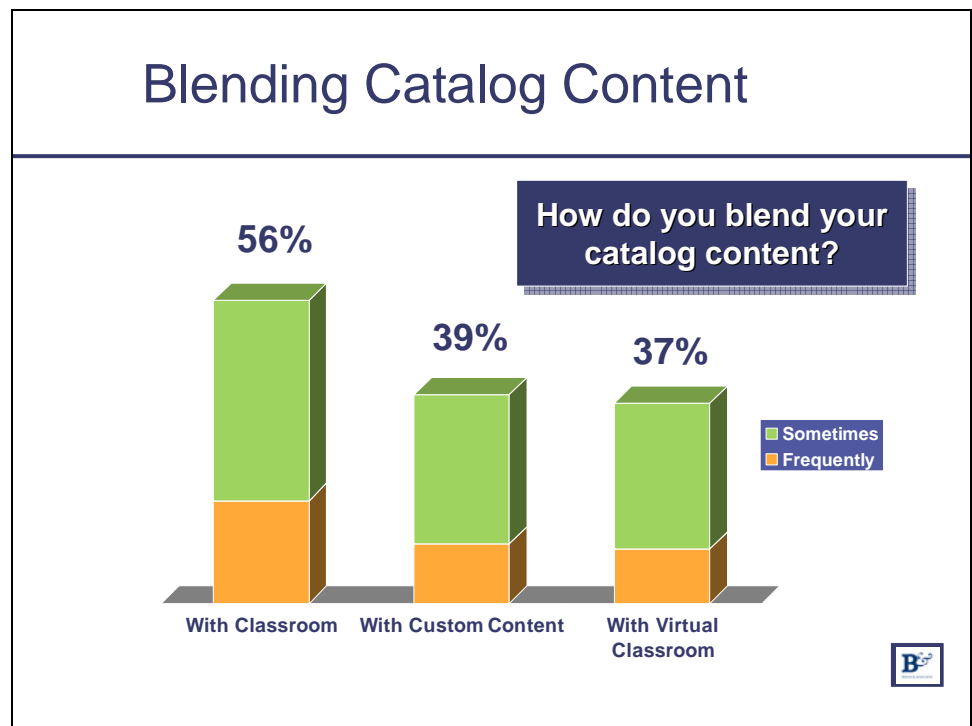


Figure 7: Blending of Catalog Content

As this data shows, more than half of all organizations now blend classroom training with off the shelf content; nearly 40% blend off-the-shelf content with custom content, and more than a third blend off-the-shelf content with live online virtual classroom events.

Online Books and References

The market for online books and references is exploding. As Figure 6 shows, more than half of all respondents in this study are frequently or occasionally using online reference materials. This tremendous growth has occurred in the last 2-3 years.

Although one could consider any digital material a reference, here we refer to the marketplace for online books. Today, one can purchase huge libraries of online books at a fraction of the cost of purchasing these materials in printed form. The leaders in the corporate training market are SkillSoft Books24x7 and Safari Online.

Training organizations are starting to license these materials for technical reference, IT, accounting, and business skills. Organizations are starting to use these reference materials as part of blended programs, thereby giving learners a complete range of materials to learn online. Online books are used in two ways:

- Technical users use online references to get access to quick answers to technical problems. They may seek out a code sample, chemical compound, or other reference material.
- Business users use online references to browse through and locate celebrity author titles. For example, a business manager or executive may browse through Jack Welch's discussion about compensation in one of his books.

The online book market today still is relatively small (under \$100m) but growing very rapidly. SkillSoft, the largest provider of off-the-shelf content, estimates that nearly 20% of its revenue comes from online books today and that this volume will equal or exceed its online courseware revenue within 5-7 years.

HR and other ERP Systems

Finally, a critical component of any e-learning strategy is the corporate HR and other HR-related systems. These systems can be simple or complex. In most organizations, the system of record for employees is an HR Management System (HRMS). These systems, often provided by companies such as PeopleSoft/Oracle, SAP, and many others, are transactional systems used by the HR department to track hiring, salary administration, benefits, and the corporate reporting hierarchy.

Learning systems (LMS, LCMS) must integrate and exchange data with these systems. Increasingly, we see a demand to integrate

learning systems with Performance Management and Skills Management systems as well. Our research shows that 56% of organizations with Learning Management Systems find this technology to be critical to their success, and more than 65% require the systems to be synchronized daily or more frequently.

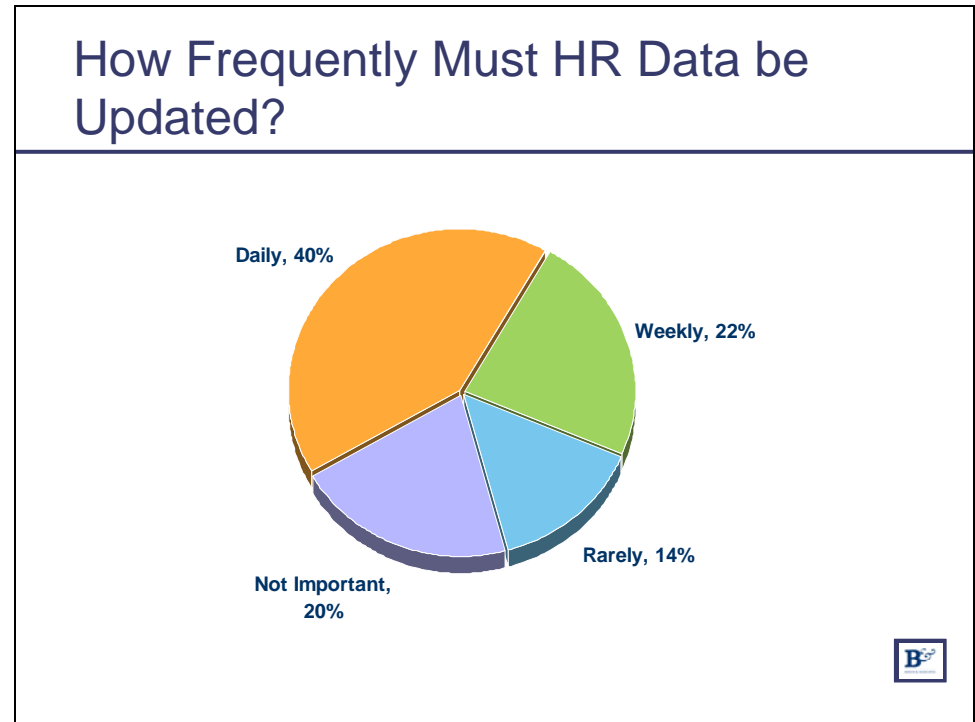


Figure 8: Need to Update Data from HR Systems

No e-learning strategy can be complete without considering such integration as one of the steps – either now or in the future.

Market Maturity Curve

It is important to realize that each of the components of an e-learning solution is at a different stage of maturity. When solutions or approaches are new, they are exciting and innovative but often unproven. Companies buy technologies but do not necessarily have proven implementation experiences to draw upon. Later in the maturity cycle, solutions are better established and there are many companies to learn from.

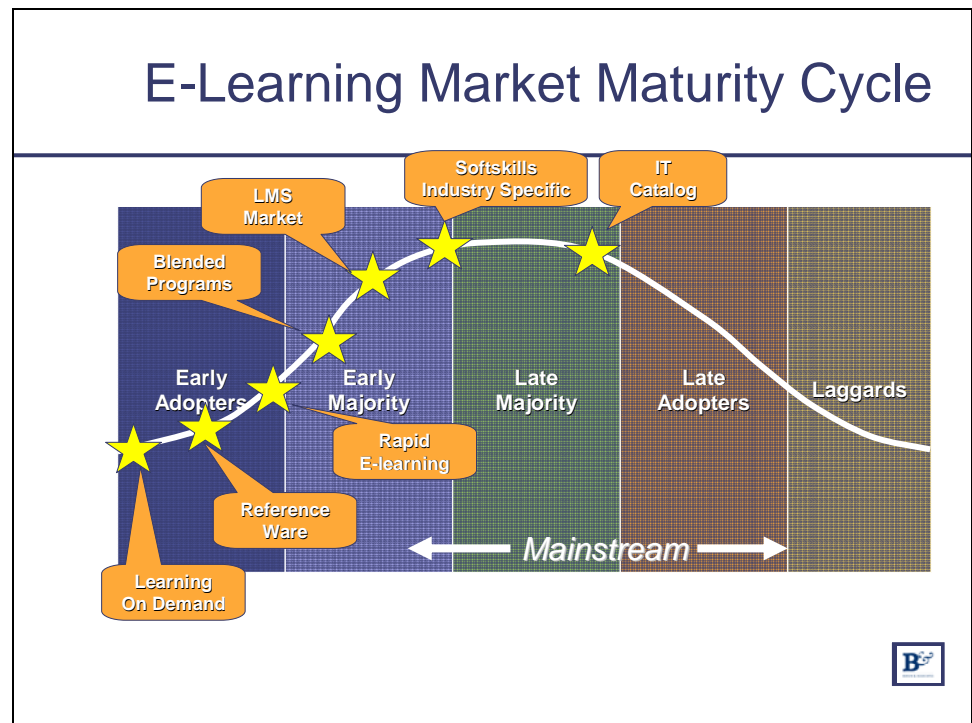


Figure 9: E-Learning Market Maturity Cycle

As the market maturity curve shows, when a technology is new, it is typically used by early adopters. The market is small and there are not very many companies to use as references. As the technology is established, more conservative companies start to adopt it and the market size grows dramatically. Eventually in the mainstream cycle, a technology or approach is widely used and may fall out of favor – to be replaced by a new approach or different version of the initial solution. This chart shows where different e-learning solutions fit today.

Where Does Your Organization Fit?

It is very important for you to understand where your organization fits. The following paragraphs define several levels of corporate evolution as it pertains to e-learning solutions.

Early adopters are companies who like to innovate. They are willing to use technology to gain a competitive advantage. They have IT staff, management, and executives who are used to doing things new and differently. Many high technology companies fall into this category.

Early majority companies will adopt new approaches to stay ahead of the market, but tend to wait until there are some reference customers to learn from. If you are in this type of organization, you probably find your executives asking, "What other organizations can we benchmark ourselves against?" or "Who else is doing this?"

Late majority companies like to wait until all the bugs are worked out. These organizations gain market share through strong customer service, support, and proven solutions – so they are wary of doing things first. They want to be fast followers. Their approach is to let someone else take the arrows, learn from them, and do it better. This is the largest segment of any market, with about 60-70% of all companies falling into this category.

Late adopters are companies who tend to show up late. They are sometimes disorganized, distracted, or perhaps busy with other critical business issues. Many late adopters may, in fact, do the best job of implementing a solution because they take the time to study, plan, and organize themselves for success. The only risk these companies have is that the solution they chose may become obsolete during the time they decide to implement.

Laggards wait until the market is almost over and then jump in. These companies are the ones that are now developing web sites, for example.

As an e-learning manager, HR manager, or executive, you must be aware of your own company culture. If you try to adopt an unproven early adopter approach and you are working in a late majority company, you may find little or no tolerance for bugs, mistakes, or failures. As you read through this study, make sure you remember that your stage of evolution is highly dependent on the culture of your own organization.

The Stages of E-Learning

The central theme of this research is the maturity model for corporate e-learning.

As we interviewed and talked with hundreds of corporate training managers we identified three key stages of implementation. These stages are common across all organizations, regardless of size. Think about these stages as evolutionary stages – you move from one to the next naturally over time.

Each of these stages has different business drivers, challenges, and business benefits. You should be able to identify where your organization fits on this roadmap and use the research in this report to plan your next steps in becoming more successful.

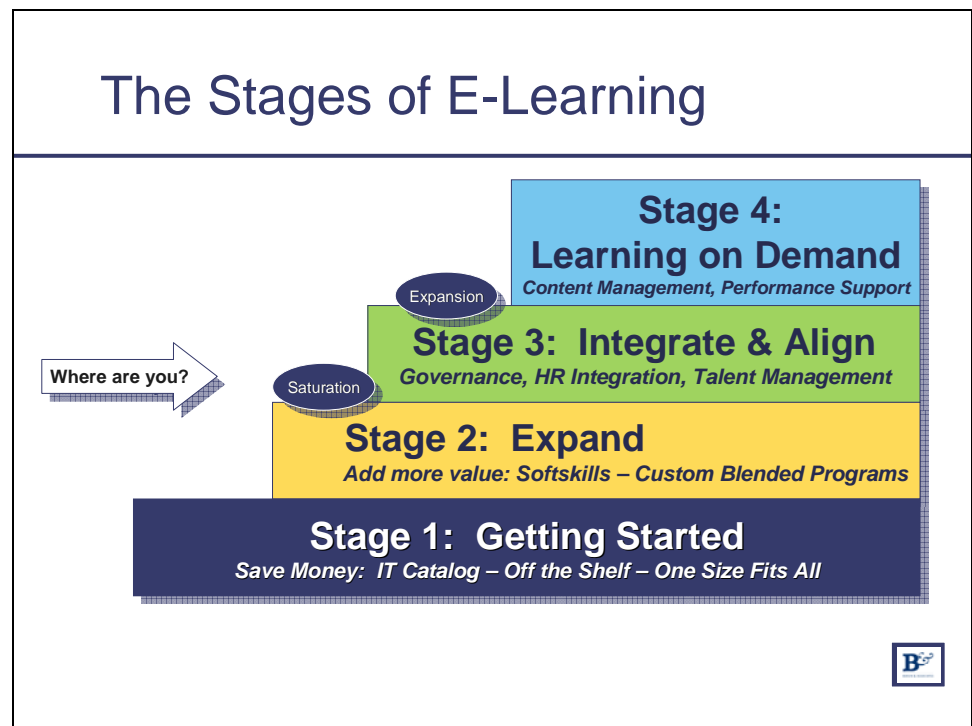


Figure 10: The Stages of E-learning

Stage 1: Getting Started

Stage 1, “Getting Started”, is where all organizations begin. In this stage, the organization typically is new to online training and has identified one or more important programs that can take advantage of this approach.

Business Drivers

In this stage, the company usually is focused on the following business drivers:

- Desire to **save money** by reducing the cost of travel, reducing cost of facilities and instructors, and reducing the inefficiency of poorly attended programs.
- Desire to **improve reach** by increasing the number of users who have access to training because they did not have time or funds to attend training in the past.
- Desire to **improve the range** of learning offerings by giving employees and customers access to a wider set of learning programs, self-study programs, and topics that are too expensive and difficult to offer in an instructor-led format but can be purchased and delivered online.

The business case for an e-learning solution usually is built around one or more of these three factors. Although cost savings were the genesis of most e-learning investments, companies now know that cost savings are not the ultimate result. Ultimately, e-learning replaces variable costs (instructors and travel) with fixed costs (content, technology, and infrastructure) to increase speed and scale.

Implementation Focus: Catalog Content or Single Program

Most organizations start their e-learning initiative with a single program or subject area. In most companies, the e-learning wave starts with online IT training.

Organizations usually can start with an off-the-shelf catalog from SkillSoft, NETg, Element K, or another more vertical provider and enhance it with industry-specific content. Many Stage 1 organizations start by purchasing a single course and rolling it out to many people as an experiment.

The U.S. Department of Forestry Firefighters, for example, needed an e-learning program to deliver compliance training to volunteer firefighters in many cities and states. They developed and deployed a single course in a content provider's portal to get started.

In Stage 1, companies often realize they need to purchase an LMS as part of their implementation but usually do not have the budget. When purchasing an LMS, these companies typically purchase a solution bundled with content from a content provider. Or, they purchase a low cost, easy to implement hosted suite from a provider such as Blackboard, GeoLearning, Learn.com, NETg, SkillSoft, ViewCentral, Vuepoint, or others.

Biggest Challenges

Hilton embarked on an e-learning strategy by selecting 70 off-the-shelf courses from SkillSoft. The company is very decentralized with many remote locations that did not have access to IT and soft skills training at all.

Through a series of communications from the CEO and careful change management, Hilton recruited 2,500 active users and drove completion of more than 10,000 courses in the first year.

There usually are three challenges in Stage 1:

- First, **obtaining funding** for the first such effort and developing a business case that justifies the organization's entry into e-learning. Although most companies have passed this point, many struggle to cost-justify the high initial investment and have pushback from instructors and managers about the viability of e-learning for their particular audience and business problems.
- Second, **selecting the right infrastructure and content**. Companies at this stage "don't know what they don't know" so they can be confused by the large number of vendors, content providers, and tools available in the market. Our research finds that the best way to enter Stage 1 is to partner with a strategic content provider (SkillSoft, NETg, ElementK, or a vertical provider) who can deliver a complete solution that can be deployed quickly.
- Third, and sometimes the biggest challenge, is **culture change**. Organizations that are new to this approach sometimes find that their employees or customers are afraid or do not have the necessary connectivity to access the online programs. These problems must be overcome through careful change management, marketing, and technology standards. You only have one chance to make a first impression and if the initial e-learning programs are hard to launch or hard to use, many learners will never come back.

Where is the Market?

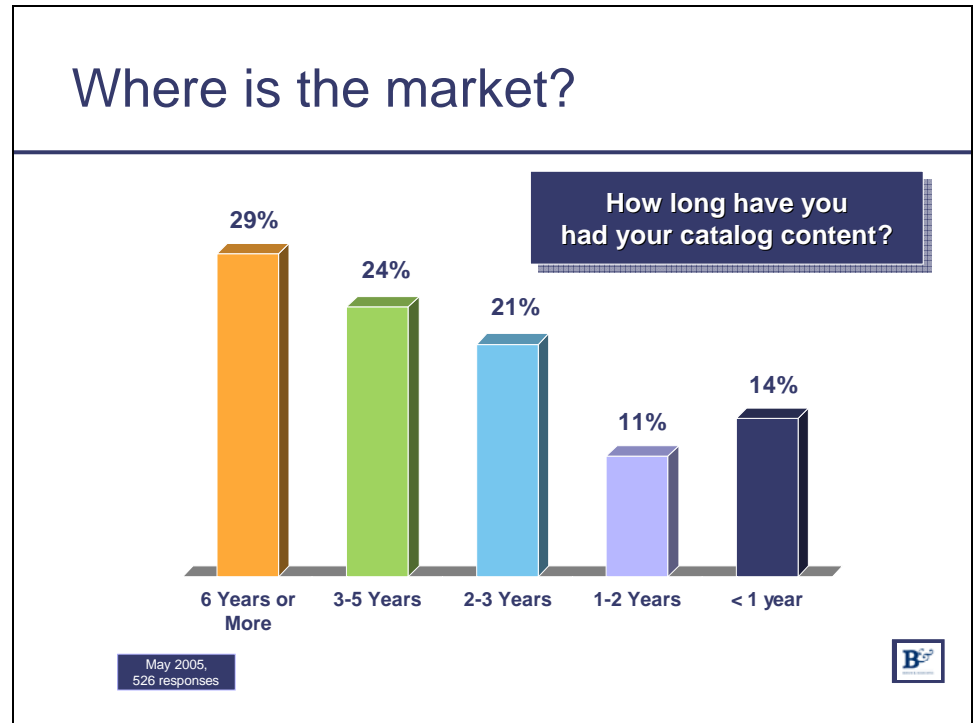


Figure 11: Customer Market Maturity

When we look at the research we conducted in the summer and fall of 2005, we found that 24% of e-learning users were still in the first two years of their catalog content investment. These clearly are Stage 1 companies. Since this research was sent only to customers of catalog providers it is biased, so in the broader market we believe that as many as half or more of all corporations are still in Stage 1.

Who are these Stage 1 organizations? As Figure 12 shows, small and medium-sized companies are newest to e-learning. Large organizations are much more likely to have been experimenting with e-learning for several years.

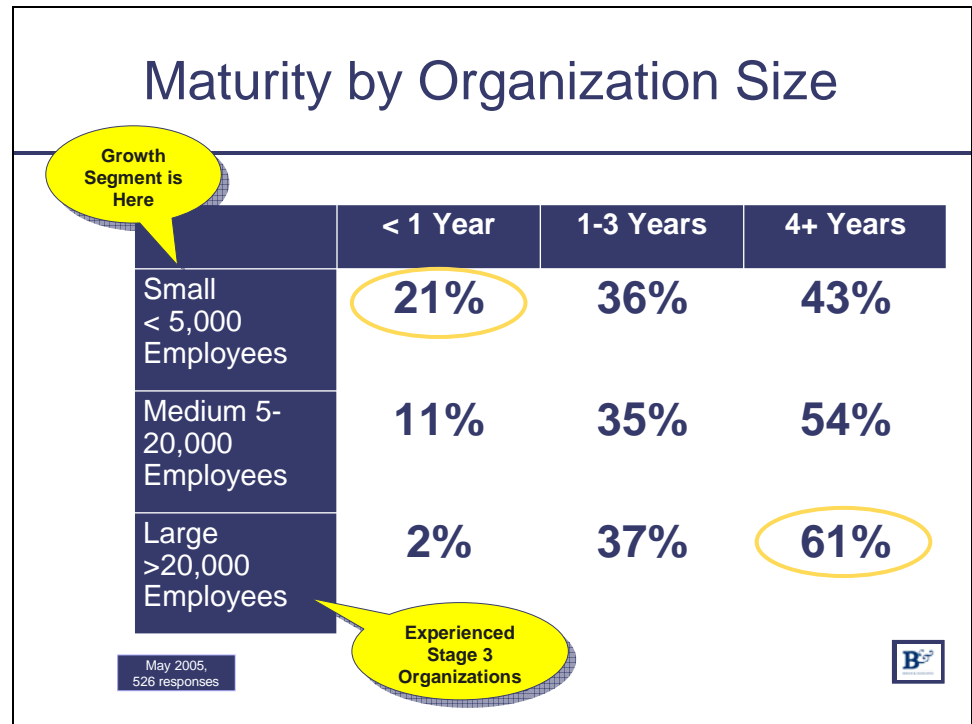


Figure 12: Maturity by Organization Size

There are several reasons for this. First, in the early days of Internet-based training, the solutions were very complex and expensive. It was expensive to get started. Many early adopter companies spent millions of dollars on content libraries, rich media, and custom content only to find that much of it was never used. Such sums of money are rarely available to small- and medium-sized organizations.

Today, by contrast, there are a wide variety of low-cost, off-the-shelf integrated solutions and many consultants with experience building and deploying e-learning programs. It now is much easier for small- and medium-sized companies to jump in.

Are you in Stage 1?

How do you know if you are in Stage 1? Some of the indicators include:

- You are in your first or second year of an e-learning program.
- You are focused on rolling out and marketing off-the-shelf catalog content.
- Your business case for e-learning focuses on saving money on travel and instructor time and increasing the reach of training to new audiences.

- You do not have an enterprise-wide LMS, nor do you have a business case for an enterprise LMS.
- You may be using live e-learning (Webcasting tools) or rapid e-learning but do not have much of a content library yet.
- You may not have a methodology to decide when to use live vs. self-study options.
- You are dealing with issues of culture and adoption and are not sure how to get learners to use the e-learning you currently have.


What maturity level are you?	
Stage	Key Issues You Face
 Stage 1: Getting Started	Saving Money Implementing Catalog & LMS Marketing your Programs
Stage 2: Expand	Developing Blended Programs Rapid E-Learning Expanding Use of your LMS Reference Ware
Stage 3: Integrate & Align	Integration w/ Business Systems Performance Mgt, Skills & Comp Content Development Strategies

Figure 13: At What Stage is Your Company?

These issues are very common in the first year or two of an e-learning program.

Stage 2: Expand (Growth)

After the first 12-18 months of an e-learning program, the issues change. Your organization has started to become familiar with the pros and cons of using online learning. We call this phase "Expand."

Key Issues in the Expansion Phase

In the expansion phase, organizations uncover the following issues:



Deloitte started its e-learning initiatives in 1995 with a large library of content. In 2000, the company formed a Global E-learning group that focused on e-business topics.

In 2002, the company expanded its offerings into a “virtual shopping mall” for programs with a dedicated infrastructure – SkillSoft content for courseware, Centra-based programs for live events, and Saba for its LMS.

Today, Deloitte is blending off-the-shelf programs with instructor-led programs and is developing custom exams and pre-assessments to deliver “just-enough” learning.

- **Access:** Not everyone in the organization has access to computers or networking, so some content is unavailable to many learners. This forces you to create standards for content development (standard plugging, standard bandwidth requirements, standard software versions required to run) and standards for e-learning capable PCs.
- **Outreach and Support:** You realize that many pockets in your organization are heavy adopters while others are light adopters. You are developing outreach campaigns (newsletters, local coordinators, regular conference calls) to make sure those business units and workgroups are aware of the availability of e-learning in your organization. You now have a regular support person (or group) to provide technical, usage, and program support for users.
- **Platform and Branding:** You realize that your LMS or content delivery platform is very important to encouraging adoption. You likely have created a branded portal and given your learning center a brand-name, logo, and easy-to-use registration and login interface.
- **Blended Learning:** You now realize that online self-study courseware is not appropriate for all problems, and you are moving toward blended learning programs. This transition requires that you enhance your platform and create a program management function that manages all the registrations, materials, and reporting for these important blended programs.
- **Custom Programs:** You have had many demands for custom programs and you have built one or more business-critical custom programs. These programs forced you to build a small in-house development team (or find an outsourcing partner). These custom programs further illustrated the need for standards – standards for branding, content development techniques, reuse of graphics, editing, and standard technologies.
- **Measurement:** You now realize that it is harder than you thought to measure and report on all the programs you have deployed, so you are focusing on creating custom reports to identify which learner groups are most active and which are falling behind. You may have an individual dedicated to these reports and analyses.
- **Other Platforms:** You realize that you need a standard platform and tools for live events, for content development, and for assessment – and you are working with your initial providers to standardize on more technology components so everything works together seamlessly.
- **Rationalizing Instructor Led Training:** You realize that your large library of instructor-led training programs should

be rationalized. Some of these programs should stay as-is. Some should be converted completely to online programs. Some should be blended. This requires that you educate and familiarize all your content developers and trainers with the basics of online learning and transition some of them to new roles. You find that some move easily while others prefer to remain in the instructor-led world.

Stage 2 Organization Priorities

In our study, we asked organization what their biggest issues are with their current e-learning catalog. The findings are shown in Figure 14.

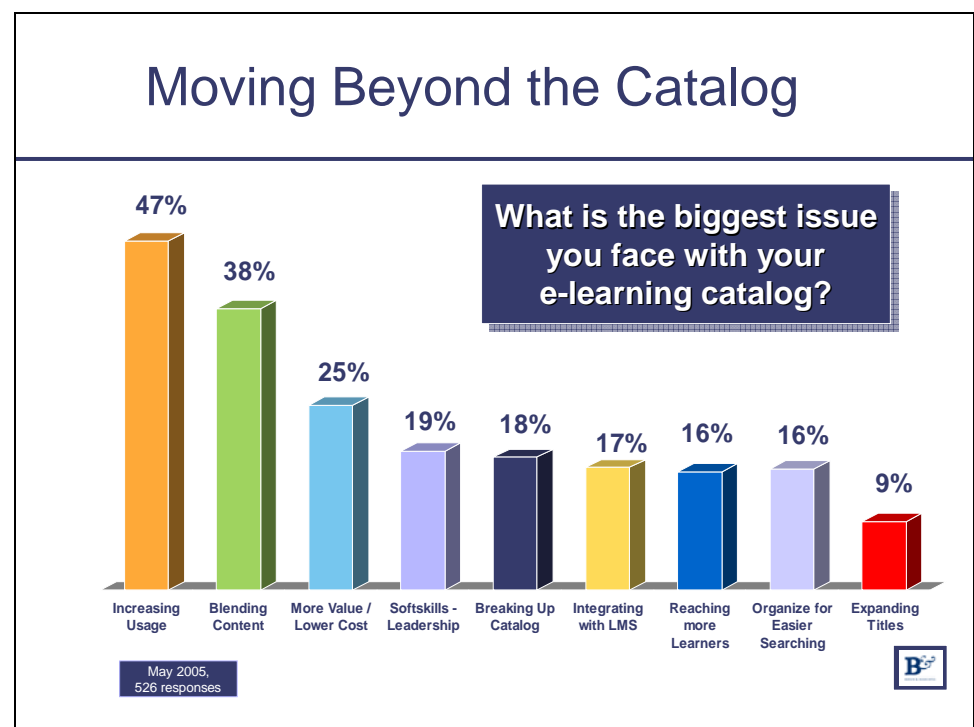


Figure 14: Biggest Issues for Stage 2 Organizations

As this figure shows, Stage 2 organizations start to focus heavily on increasing utilization, blended programs, and reducing costs.

Increasing Utilization

Increasing utilization often is a major focus of Stage 2. Once organizations publish a large library of content, they find that many programs are unused and many groups in the organization are not using the system. Why is this? It is because much of the content acquired and launched in Stage 1 is not strategic.

In the first stage, organizations often offer a wide range of catalog courses: IT training, desktop application software training, generic

soft skills training, and compliance programs. These programs, while important and high in value, are not necessarily strategic to the current business issues in the company.



Wells Fargo's initial start in e-learning started in 1997 with the release of a large IT training catalog. Over the years, this catalog grew and, by 2000, Wells Fargo realized that the utilization of the course catalog was very low. The company found that people were taking courses, but only the portions they needed. For example, people would jump into a course on Excel to learn how to create a pivot table – but they did not complete the entire course.

Today, Wells Fargo's IT training is a blend of instructor-led programs, self-study, and live online events. The company focuses heavily on the most strategic IT programs and is planning to switch about 2/3 of its ILT programs to a live, online format. The company provides small learning objects whenever possible to give users access to "just-enough" learning and to meet performance support needs.

Wells Fargo ensures high utilization by making certain that all training initiatives are closely aligned to IT business initiatives. The IT training executive sits on the committee with strategic IT managers and is intimately involved with the planning for every new system project or rollout.

Figure 15: Wells Fargo IT Training Alignment Process

The most important transition that organizations make in Stage 2 is from a large library to strategic offerings. This is a natural transition toward further aligning the e-learning strategy with timely and specific business needs.

Reducing Costs

While the initial business case for e-learning usually is cost reduction, after a few years companies realize that the capital investments in technology and content can be high. In Stage 2, they start to look for less expensive ways to increase the scale of the e-learning initiative.

One approach they use is to outsource key training functions.

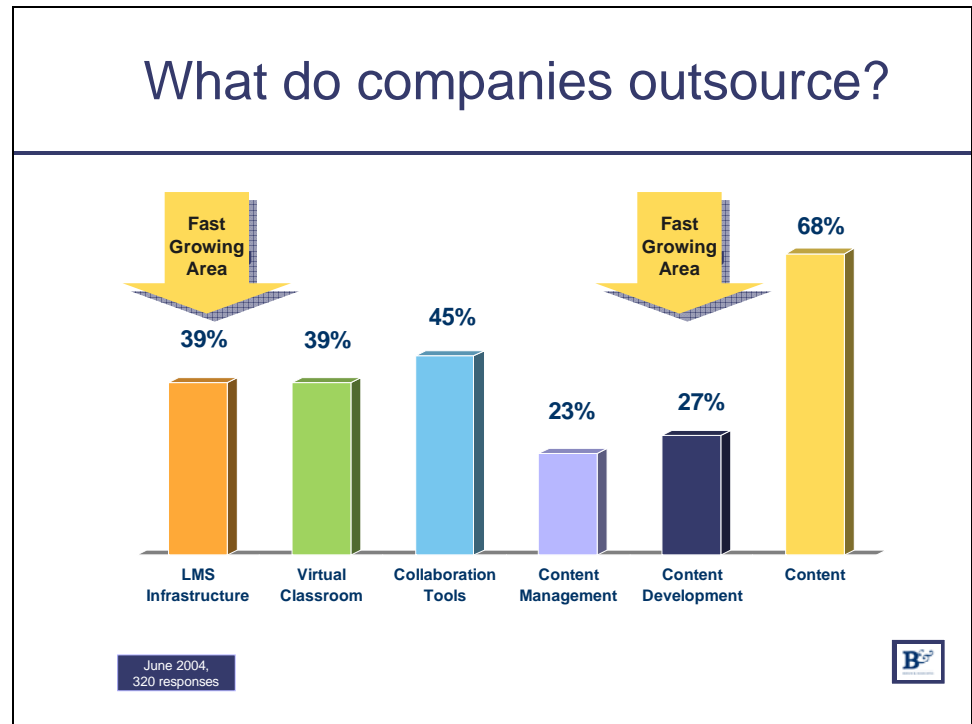


Figure 16: Outsourcing Trends

This also is the time when many organizations start to look at outsourcing or offshoring. Companies in this stage realize that content development requires many different disciplines, so they decide to develop an outsourcing or offshoring strategy to reduce costs. Today, offshoring of e-learning content development (and technology) accounts for a rapidly growing percentage of e-learning investments. Our research finds that most offshoring (having work done in India, for example) can save 20-40% in content development costs⁵.

Online Books and References

A key transition in the expansion phase of e-learning is the realization that the traditional courseware paradigm does not apply to all problems. In fact, far more business performance problems can be solved by performance support, which we call "Learning on Demand," than by traditional linear training.

As Figure 16 shows, 40 % of online learning buyers today are adopting online books and references. This is a startling finding. Such programs only have been available for 2-3 years and already they have penetrated a significant number of corporate training organizations.

⁵ *Offshoring E-Learning: What Works*, industry study available from Bersin & Associates at <http://www.bersin.com/contactus/offshoring.asp>.

What we find, as in the case of Wells Fargo and many other companies, is that the advent of Google and an internal e-learning system leads learners toward the behavior of looking for answers online. “Answers” and “Training” require very different forms of content. When a programmer, engineer, or manager wants an answer to a question, they do not want to take a course, they want to find a reference, read it, and go back to work. This learning on demand model appeals to the way human beings use the Internet and we are finding that the explosive growth of online books and references supports this demand.

Most organizations that adopt online books and references at this stage start with an IT library and then quickly evolve to business skills and specialized areas. Accounting firms purchase online accounting references, law firms purchase online legal books and references, etc. Today, companies, like Books24x7 (part of SkillSoft) and Safari Online, provide these solutions.

Are you in Stage 2?

How do you know that you are in Stage 2? Here, the indicators are:

- You successfully have rolled out many off-the-shelf programs, you have a library online, and many learners have completed courses.
- You have some type of learning management system (LMS) platform, although it may not be deployed enterprise wide.
- Your organization has not completely adopted or embraced e-learning in a big way. Some, or many pockets, cannot yet get access, they hesitate or refuse to take courses, or they simply do not buy into this approach.
- You have been asked repeatedly for custom content and you have started to build (or outsource) these programs.
- You are past the initial honeymoon period of saving money and your e-learning program now is a fixed cost that must be managed. You are looking for ways to reduce the cost of content and content development.
- You are starting to replace many ILT programs with blended programs or virtual classroom technology. You are experimenting with blended approaches and working with instructors and trainers to make sure they are comfortable with these new approaches.
- You have explored rapid e-learning and are using this approach for some percentage of your content development needs.

- You have built or are starting to build a complete set of standards for content development, for LMS administration, for user support, and for technology and tools.

This stage of growth and evolution is where most companies are today.

What maturity level are you?	
Stage	Key Issues You Face
Stage 1: <i>Getting Started</i>	Saving Money Implementing Catalog & LMS Marketing your Programs
→ Stage 2: <i>Expand</i>	Developing Blended Programs Rapid E-Learning Expanding Use of your LMS Reference Ware
Stage 3: <i>Integrate & Align</i>	Integration w/ Business Systems Performance Mgt, Skills & Comp Content Development Strategies

Figure 17: Are you at Stage 2?

In this period of growth, you are starting to see that e-learning is not the right fit for many programs. You have found some programs that work, and some that fail. Despite these failures, you likely are finding that your e-learning investments are driving far more than cost savings. They are giving you a new reach and range of training and performance support.

Stage 3: Integrate and Align

After 3-5 years of experience with online training (some companies move faster), organizations reach a stage of e-learning where the “e” starts to fade. At this stage, organizations realize that online learning approaches are just that: one of many approaches. E-learning is not a goal in itself – it is a technique or delivery option that fits into a broad array of training and knowledge management solutions.

Organizations at this stage change focus. Now the focus is **integration** and **alignment**.

E-learning is No Longer a Standalone Solution

One of the important transitions that occurs as e-learning grows is the realization that e-learning programs do not stand alone. They fit into a broad array of communication and knowledge management tools used throughout the organization.

For example:

- Sales uses PowerPoint-driven rapid e-learning for product updates.
- Executives use online audio recordings for company announcements.
- Workgroups use Webcasting technology for collaboration, meetings, and informal training.
- Product business units set up FAQ databases, help files, and small online courses in order to help customers.
- Call centers want to integrate courseware “learning how” with performance support “how do I do...” databases.
- Compliance officers need to track progress, completion, and expiration of critical compliance programs, some of which are very simple and some are mastery-oriented.
- The training organization has a wide range of master programs for managers, executives, and professionals that use collaboration, discussion databases, and online assignments.
- The VP of HR insists that the online learning and training catalog must meet the company’s broader talent management and skills gap demands.

These examples illustrate how e-learning has moved beyond the training department. It is no longer a tool to help reduce the cost or increase the reach of training. It now is a business performance improvement tool that must fit into a wide variety of applications.

This transition causes the training and HR organizations to focus on integration and alignment.



BP Lubricants sells Castrol oil products throughout the U.S. and Canada. After starting its e-learning initiative with a catalog of 100 off-the-shelf business courses, the company found that sales teams needed a focused, custom program designed to help them differentiate and position Castrol as the premium synthetic motor oil.

BP worked with SkillsSoft to customize and enhance existing content in order to build an Automotive Service Excellence (ASE) certified program with four 15-minute modules focused on the value of synthetic motor oil. This course, coupled with wallet-sized registration cards that show sales reps and distributors how to access the system, have been rolled out to more than 950 sales reps and distributors. For learners without access to the Internet, the BP team created course booklets with a paper version of the course and test. This enhanced solution, built on the e-learning base, has generated significant improvements in sales and satisfaction in the distributor network.

Figure 18: E-learning Evolution at BP Lubricants

Two Types of Integration

The word “integration” can have two meanings.

- First, integration refers to the technology integration of e-learning systems and how they fit together into a flexible solution that meets the needs of many business units.
- Second, integration refers to the process integration of e-learning into business processes and the daily life of managers and workers.

Let us look at both.

Technical Integration: Data and Systems

As online learning approaches are used for more business-critical applications, it becomes mandatory for the e-learning platform to be integrated into a variety of IT systems. The first category is integration with *enterprise systems*.

- **LMS-HRIS Integration:** The first, and often most complex, is the integration of the LMS with the HRIS system. Most organizations have an HRIS system that is the employee system of record, holding all confidential data about employee hire date, salary, reporting structure, etc. The

LMS, on the other hand, is the system of record for training activity, competencies, certifications, and skills and competencies⁶.

LMS-HRIS integration can take years to implement because of the wide variety of data that must be synchronized. Most organizations develop simple batch integration in Stage 2, but, by Stage 3, organizations find that they need to replicate the corporate hierarchy, skills and competencies, and charge codes. The data must be synchronized automatically.

- **LMS-CRM or Sales System Integration:** As organizations deploy e-learning to customers and partners, they realize that the learning history of customers and partners is just as important, or sometimes more important, than the learning history of employees. The customer system of record is not the HRIS, but rather the Customer Relationship Management (CRM) system. The CRM system usually is governed by sales and marketing.
- **LMS-Financial Systems Integration:** In both of the above cases, when training is sold to customers or recharged to departments, integration is required to the company's financial systems.

The second category of data and systems integration revolves around integration with content platforms. Here, the types of integration include:

- **Integration with Help Systems:** Earthlink's call center, for example, uses a system from Kana to handle all help files. These help files are simple questions and answers, such as, "How do I change a password in system A?" The company's e-learning programs are used to teach new call center agents basic skills and procedures. How do the two systems stay in sync? The content must be integrated in some way.
- **Integration with Performance Support Systems:** Aetna's call centers use a wide range of performance support tools to assist global call centers. These tools provide help files as well as simulation-based training for agents who have time to brush up on new materials. Some content is training-centric, other content is reference materials. Together, the platform provides a complete support solution for call centers.

⁶ In our report, *The Convergence between Learning and Performance Management*, we explain the reasons for holding skills and competencies in the LMS vs. the HRIS. Many organizations attempt to build skills and competency databases in the HRIS, but usually this information is far more useful and easier to maintain in a global LMS that is integrated with a performance management system. This report is available at <http://www.bersin.com/convergence>.

- **Integration with Customer Support Systems:** Microsoft, Oracle, Gateway, EMC, and other product suppliers offer technical support databases online to customers. They also offer short e-learning courses to help customers solve problems. These two systems must be integrated in some way so a customer can find just what they need.

Content integration is often difficult and expensive. Because the industry e-learning specifications (AICC and SCORM) are not uniformly implemented, organizations find that they must dedicate internal resources to make sure various forms of content work correctly.

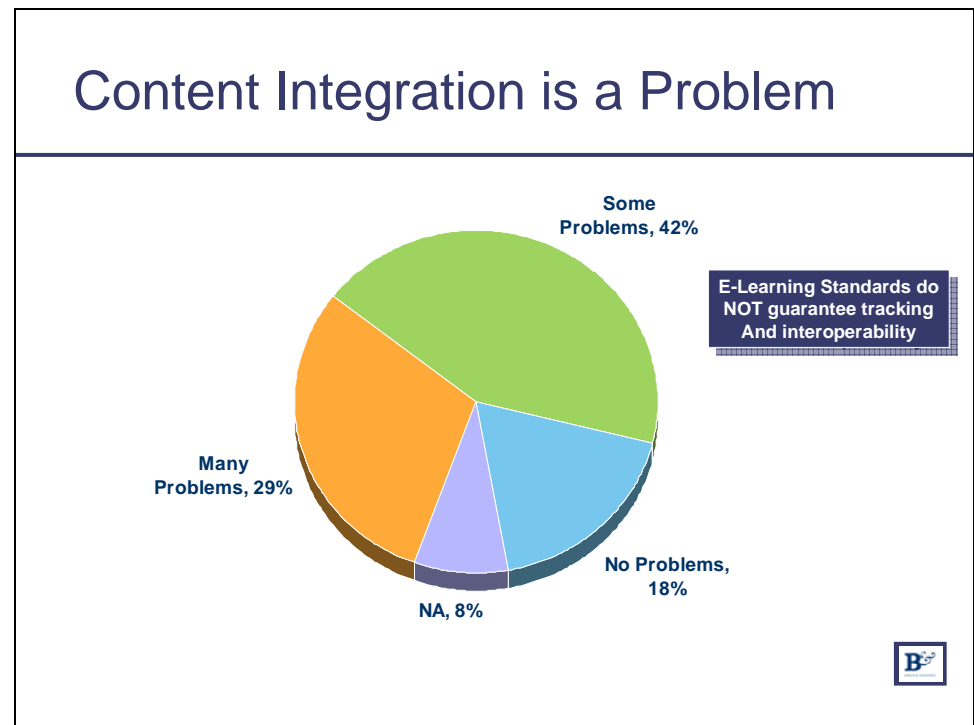


Figure 19: Content Integration Challenges


These examples are not intended to explain how all these integrations are done, but rather to point out that in Stage 3 you will find these integrations become high priority projects that enable you to expand the value of your e-learning investments. For more details on the issues in systems and content integration, please read our research "Enterprise E-Learning Integration⁷."

The Important Role of IT

In stage 3 it is imperative that IT take ownership for the e-learning platform. The types of integrations shown above cannot be

⁷ Enterprise E-Learning Integration: *What Works*®, available at http://www.bersin.com/contactus/enterprise_integration.asp

implemented without the corporate or business unit IT department's involvement and ownership.



Morgan Stanley has developed a wide range of e-learning programs for many applications. In the last year, the company realized that each e-learning program had a different look, feel, and behavior. Different content providers offer different levels of tracking and reporting. How could the bank create a more standardized look, experience, and level of tracking?

Morgan Stanley assigned one of its key IT architects to the learning organization. This individual learned the SCORM specifications and developed a Morgan Stanley-specific SCORM player for all online content. This player, which now is a requirement for all content developers (internal or external) at the bank, enables Morgan Stanley's content to be deployed, tracked, and reused throughout the bank in a consistent and easy to support manner.

Figure 20: Morgan Stanley Learning Technology Strategy

Process Integration

In addition to the integration of systems and data, in Stage 3 organizations realize that the e-learning and training processes must be integrated with other business processes. For example:

- When a new employee is hired, they are automatically enrolled in a series of online and classroom courses that are customized to their particular job. Managers can see the progress of the new employee and the employee can plan their first several months easily (Wachovia Bank).
- When a channel partner orders a part for resale, the CRM system checks with the LMS to make sure this partner is certified to sell and service this product. If they are not certified, the system sends them an email with a link to enroll in certification (Symbol Technologies).
- When a mortgage counselor starts to process a new mortgage for a client, the processing system checks to make sure this counselor is trained to handle the product they are selling. If they are not, an email is sent to the manager warning them that they should monitor the transaction. (Greenview Mortgage).

Business process integrations can be much simpler. For example, a telecommunications company, CT Communications, drives its five corporate goals by requiring each employee to complete an e-

learning course each year that corresponds to each corporate goal. The goals are high level goals (customer service, quality, teamwork, financial results, and accountability). For each goal, a series of courses is available to meet the requirements for completion. The employee decides which course to take and the manager receives a report on completion.

Alignment: Driving Business Results

The second major effort in Stage 3 is what we call **alignment**: making sure that all training programs align with specific corporate-wide and business-unit urgent needs and priorities.

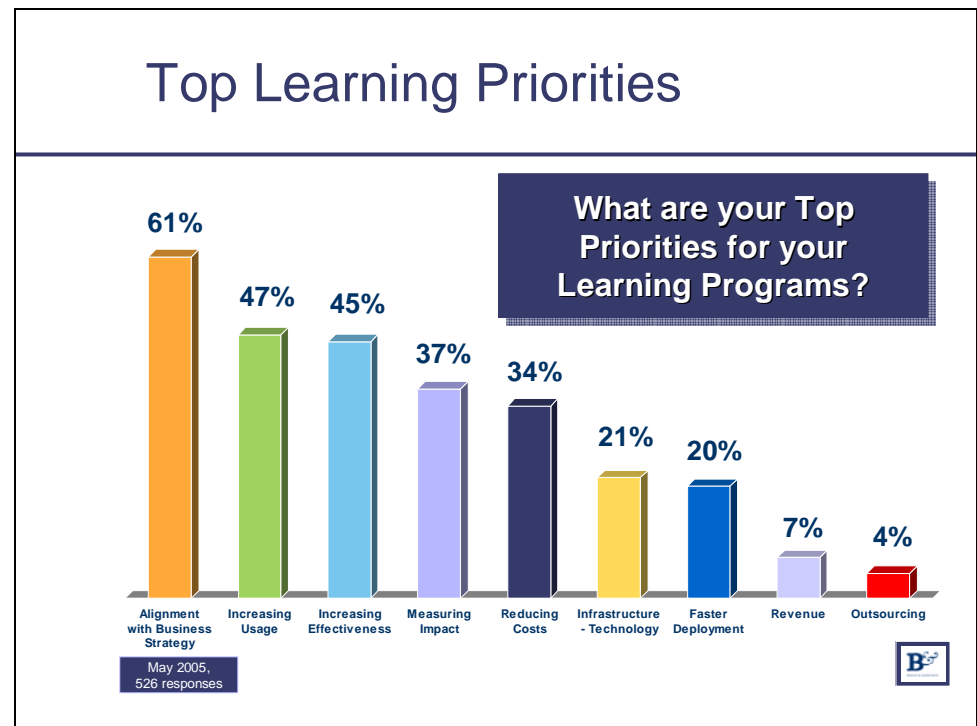


Figure 21: Alignment - Top Learning Priorities

As Figure 21 shows, the biggest topic on the minds of training managers and executives is alignment. Ultimately, an e-learning strategy must be focused and aligned with the most pressing business needs.

There are a variety of alignment programs and projects that become important in Stage 3: alignment with lines of business, alignment with HR, and alignment within training.

Alignment with Lines of Business

The first and most important customer of training is the line business manager. Does your e-learning content and program meet their most urgent needs? Typically, much of the off-the-shelf

content companies provide is “nice to have.” Managers like to have it available, but it may not address current problems or projects.

How can you make sure all your e-learning projects and strategies focus on today’s most pressing problems? The answer: by building trust and performance consulting processes that work directly with line organizations. Let us look at how Wells Fargo uses a performance consulting process to stay aligned.

Wells Fargo uses a process for business unit alignment with the IT organization they call “causal chain analysis.” This process assumes that business successes result from organizational performance, which in turn results from individual performance, which in turn results from behaviors, knowledge, and skills.



Wells Fargo uses this process for performance consulting by starting at the right (Business Results). The learning team determines where business results are failing and tracks back to individual performance – identifying behaviors, knowledge, and skills that need improvement.

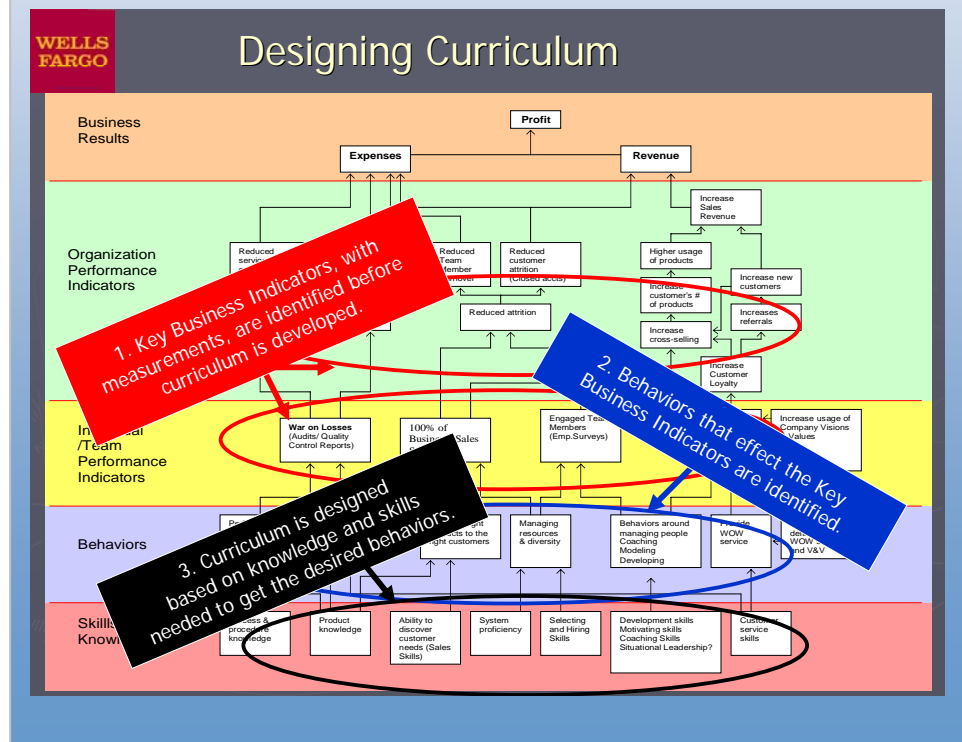


Figure 22: Wells Fargo Causal Chain Analysis

This performance consulting model is well respected at Wells Fargo. The Wells Fargo training organization has developed so much respect within IT that the IT group invites training personnel into all strategic planning meetings so that training plans are incorporated into every major IT project.

In Stage 3 of e-learning, such processes are mandatory. E-learning is no longer a project but now is a tool that should be aligned with critical business demands.

Alignment with HR

The second area of alignment in Stage 3 is alignment with HR processes. In most organizations the training group reports to HR but has independent budgets and often a decentralized organization. HR, by contrast, is usually a centralized corporate function that strives to develop and support standardized employee-related processes throughout the company. HR alignment falls into three areas:

HR Programs: Once e-learning is well adopted, HR managers will start to request (or demand) that e-learning be used as a tool for corporate compliance, management training, new hire training, and other HR-related programs. These programs typically integrate directly into the daily lives of first line managers and employees.

Talent Management: In many companies, HR now is focused on talent management,⁸ which refers to the use of skills and competency management, assessment, and training to identify critical skills gaps and high achievers, to create succession plans, identify critical skills needed, and enable workforce redeployment to meet urgent needs.

Talent management initiatives require the development of a skills and competency database, and targeted learning programs that meet the needs of critical organizational skills. These programs are driven by HR. In Stage 3, training organizations typically work with HR to develop a standard skills library, build or buy courses that support these skills, and implement this library in the LMS.

Performance Management⁸: A major new initiative in many companies is the automation of performance management (developing performance plans, delivering and capturing performance reviews, 360 feedback, and assessment). Many of the steps in performance management involve training (creation of a

⁸ For a more detailed discussion of Talent Management and Performance Management please read, *The Convergence between Learning and Performance Management: What Works*, available at <http://www.berstein.com/convergence>.

development plan) and the skills and competency database. In Stage 3, training organizations often need to integrate or enhance the LMS to integrate with the company's performance management solution. When implemented, the solution also drives training requirements. This creates a "build-list" for training managers, which aligns their programs with HR and line manager needs.

Alignment within Training: Governance

The third form of alignment, which becomes critically important in Stage 3, is alignment across the training organization itself. In large organizations, training often is spread out between a central group and many departmental or divisional organizations. As the e-learning investments grow, there are a variety of new issues that the organization must deal with:

- How will you standardize on content development so that different groups can build their own content yet share tools, best practices, graphics, and training content?
- How will you standardize the administration of programs in the LMS across geographically diverse groups? What functions should be centralized vs. distributed?
- How will you standardize assessments and measurement? Will you have a standardized Level 1 (feedback survey) across all programs? Will you have standardized Level 2 (scores or competency assessments) assessment policies? What operational metrics will you measure? How will you benchmark your e-learning and training from year to year?
- How will you manage content across the training organization? Will you have a centralized, version-controlled, content management system? Will there be a global library administered in one place?
- How will you standardize content integration and content conversion? If a business unit wants to purchase or build a piece of content, how will you make sure that it launches, tracks, and runs correctly in your LMS?
- How will you handle budgets and recharge? If a business unit wants to buy a non-standard program, will you let them? How will you support them?

At this stage, organizations focus on building shared service teams, standards, and technical groups that centralize content integration, testing, and measurement. Often in Stage 3, a CLO role is needed to pull these functions together into a highly accountable,

centralized organization⁹. These decisions and programs to align training are critical elements of a Stage 3 organization.

How do you know if you are in Stage 3?

As Figure 23 shows, if you are focusing on integration, performance management, skills and competencies, and content development strategies, you are in Stage 3.


What maturity level are you?	
Stage	Key Issues You Face
Stage 1: <i>Getting Started</i>	Saving Money Implementing Catalog & LMS Marketing your Programs
Stage 2: <i>Expand</i>	Developing Blended Programs Rapid E-Learning Expanding Use of your LMS Reference Ware
 Stage 3: <i>Integrate & Align</i>	Integration w/ Business Systems Performance Mgt, Skills & Comp Content Development Strategies

Figure 23: How Do You Know if You are in Stage 3?

One of the important transitions that takes place in Stage 3 is the realization that e-learning is no longer a goal in itself. At this point, you should be considering e-learning as a performance enhancement tool that can be used and applied in a wide variety of ways. You should have experience and expertise with many forms of online training and information distribution.

⁹ For details and case studies on best practices in the management, organization, and governance of corporate training, please read our industry study, *The High Impact Learning Organization: What Works® in the Management, Organization, and Governance of Corporate Training*. This report is available to research members and available for purchase at <http://store.bersinassociates.com/governance.html>.

Signs of Approaching Stage 3

Can you say the following?

“E-learning is no longer looked upon as a way to drive down the cost of training: it is a business performance improvement tool”

“E-learning is a tool for increasing reach, efficiency, and impact – not an end in itself”

“We do not measure e-learning adoption any more. We measure its effectiveness.”




Figure 24: Signs of Approaching Stage 3

An excellent example of a Stage 3 organization is TELUS.



TELUS is a leading Canadian telecommunications provider in western Canada, with revenues greater than \$7 billion. The company saw the opportunity to expand nationally and into the growing markets for Internet, data, and wireless communications. To execute on this change, TELUS realized that it needed its staff to develop new skills and a more entrepreneurial culture.

The company took a comprehensive approach to training that started from the CEO on down. TELUS developed a management model based on four key company values and **mission-critical competencies** for all job roles. TELUS now uses these competencies to evaluate all employees and as the core of the company's learning and development offerings. All employees must create a development plan that maps their needs in these mission-critical competencies against learning offerings (e-learning, online, or classroom-based).

All learning offerings at TELUS are focused on competencies that are either **strategic or mission-critical**. Strategic competencies allow the company to flourish in new markets. Mission-critical competencies relate to operational and service excellence in day-to-day operations.

To integrate learning into the management culture at TELUS, all managers create a **customized career development plan** with employees as part of the annual performance planning process. This development plan directs the employee toward a blended learning program appropriate to their job role. These involve classroom training, e-learning, or job shadowing. TELUS is developing these learning paths for every job role in the company. Off-the-shelf e-learning is blended within these learning paths.

The company measures course completions, assessment results, and feedback surveys carefully to make sure these learning paths are driving results and satisfaction. All learners must achieve an 85% passing rate on assessments to get credit for these job-specific programs.

Figure 25: Stage 3 Organization: TELUS

Stage 4: Learning on Demand

What comes next? Is there a Stage 4 of e-learning? Well, we believe that many new directions are taking place today, including:

- Further adoption of blended learning, thereby making all instructor-led programs blended in some way.
- Rapid growth in live online events and higher adoption of Webcast technology as a standard training tool.
- Explosion in PowerPoint-driven rapid e-learning and the growth of these tools into richer training solutions, including collaborative and content management solutions.
- Emergence of the Learning Content Management System (LCMS) as a robust category of product that more and more companies find they need.
- Evolution of simulation tools that are easier to use, enabling application simulations and business simulations to be affordable for more organizations.
- Continuous evolution of LMS and analytics systems to make e-learning solutions more scalable, easy to deploy, easy to measure, and easy to manage.

As pragmatic, research-based analysts, we try to avoid predicting the future. But in this case, we would like to highlight a trend that we think is likely to create the fourth stage. We call it Learning on Demand.

Learning on Demand (LOD) implies that all the digital learning assets (courses, references, help files, documents, and presentations) are made available on demand – just as a worker needs them. It is the blending of the course-driven approach to training with online performance support. When companies reach the point that they have hundreds of courses, references, FAQ databases, videos, and other objects online, they realize that it is time to make all this information easier to find and use.

Categorizing Content Types by Use

In our blended learning research, we found that the key to building effective and cost-efficient blended programs was to clearly understand the pros and cons of each different type of media. In *The Blended Learning Book*,¹⁰ we identify 11 different types of

¹⁰ *The Blended Learning Book*, by Josh Bersin, available at http://www.bersin.com/research/blended_book.asp.

media. We also identify seven criteria for selecting the right media, which is based on instructional strategy, availability of skills, technology, cost, and others.

When one considers how learning media is used in practice, it is very useful to think about categorizing content types by use. In corporate applications, we see two essential dimensions of content use:

1. Nature of the Performance Problem

What type of problem is the learner facing? We believe there are four types: question, problem, skills-gap, and competency-gap.

Let us use the example of a Web developer to illustrate:

Question: Do they have a simple question that must be answered immediately? (e.g., "I forget how to code the 'image' tag in HTML, can I find an example?")

Problem: Do they have a problem that warrants seeking a solution? (e.g., "My Web page table has borders that are too fat. I wonder how I can make them thinner.")

Skills Gap: Do they truly need improved skills? (e.g., "I actually have no idea how to use the DIV tag in HTML. Maybe I better just learn the basics.")

Competency Gap: Do they truly need improved competencies? (e.g., "I guess I don't really understand what HTML is and how it works. I better take a class to get certified.")

2. Time to Solution

The second dimension is time to solution. How much time does this individual, or this project, or this problem have until it must be solved? Seconds? Minutes? Hours? Days? Or months?

In the case of a Web developer working on a deadline, the time frame is likely to be hours or less. In the case of a team of Web developers developing a new internal application for loan origination, there may be many months to train and assemble the right team.

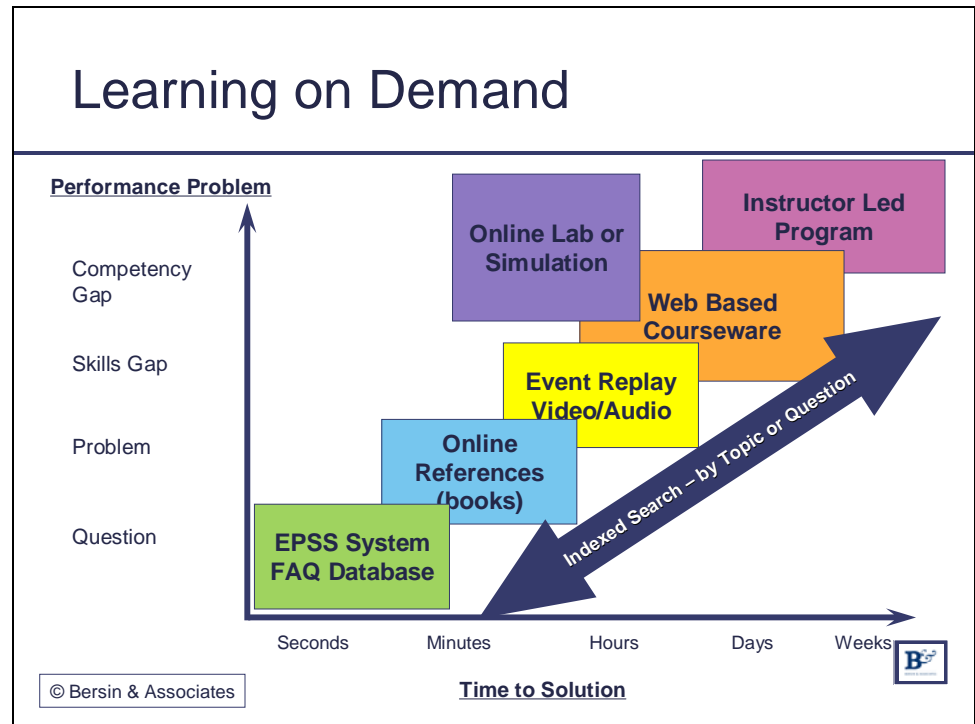


Figure 26: Learning on Demand Content Map®

Using these two dimensions, we see that different types of content fall naturally into a continuum. Instructor-led training is not appropriate for questions that must be answered in hours. Likewise, online references are not appropriate for developing intimate new skills and competencies.

In stage 4 training and IT organizations have assembled enough digital content online that they can categorize it into these different need categories and develop approaches to publishing and serving this content to support the desire for learning on demand.

The big driver of this new paradigm is the availability of new search and publishing technologies. Examples include Search, Expert Directories, and Really Simple Syndication (RSS), representing publishing.

Search

Powerful search capabilities, which now are available in SkillSoft Search-and-Learn™, NETg Search & Select™, and through many other technologies, enable learners to search through libraries of courseware, simulations, live replays, books, references, scheduled events, discussion groups, and more. If implemented properly, these searches will bring up a categorized list of learning offerings categorized by relevance and by content type.

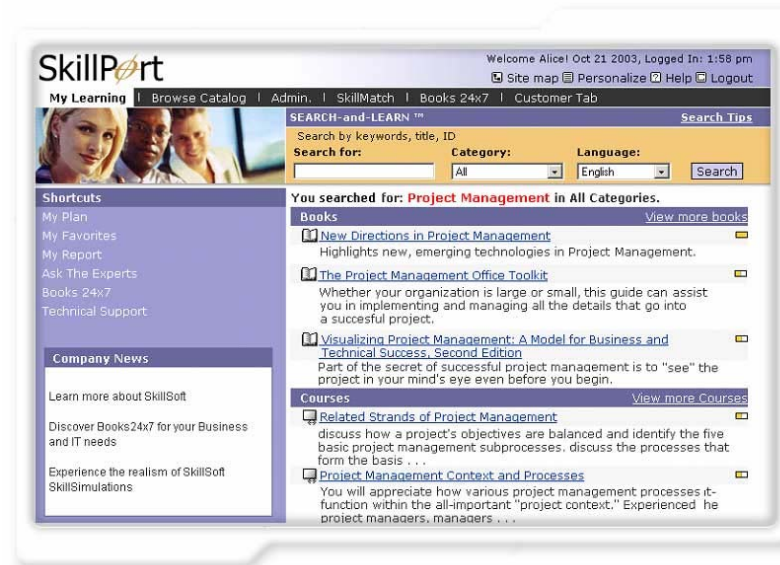


Figure 27: Learning on Demand – Search Interface

If an employee has five minutes, they can watch a short simulation. If they need an immediate answer, they can browse a help file. If they have 15 minutes, they can take a small course. This learning on demand model meets the needs of most knowledge workers today (sales people, service representatives, engineers, IT professionals, managers, executives) and, if well integrated and aligned, can replace the need for many formal training programs.

The key challenge in delivering this solution is the need for a “federated search.” When an individual searches for a solution to a problem they should see a list of results which includes all the assets available in the organization, categorized by type.

Implementing such a federated search today is difficult. LMS systems cannot search across content libraries unless all content is loaded into a Learning Content Management System. Stage 4 companies are starting to build these solutions internally, often partnering with IT and knowledge management managers.

Expert Directories

One of the parts of learning on demand is finding the right person to answer a question or help with a project. Organizations are solving this problem with online expert directories. These directories, often sponsored by the HR organization, allow workers to publish their capabilities, interests, availability, and preferred mode of contact. As these designated experts are identified, they can be published as resources within formal learning (courses) or through a general portal.

An excellent example of such a system is the IBM's Blue Pages. The search capability lets learners or knowledge seekers set criteria for the person they seek.

The screenshot displays the IBM Blue Pages Expert Directory Search interface. At the top, there is a navigation menu with links for 'BluePages home', 'My profile', 'My BluePages', 'About BluePages', 'Edit settings', and 'Help'. Below this is a search bar with a 'Smart search' button. The main content area is titled 'Search entire profile' and includes a 'Search contact information' link. A green box contains a message: 'You may prefer to search only contact information. This page searches the entire profile. For additional search options use the Search contact information'. The search form includes a 'Search for:' field with the text 'Human Capital Management, Learn' and a 'GO' button. Below the search form are several filter sections: 'Geography' with radio buttons for 'All', 'Americas', 'Northeast Europe', 'Southwest Europe', and 'AP'; 'Sub-geography' with a dropdown menu; 'Country/Region', 'State/Province', and 'City' with dropdown menus; 'Job responsibilities' with a text input field; 'Job category', 'Principal job role', and 'Business unit' with dropdown menus; 'Industry', 'Technology', 'Platform', 'Solution/Product', 'Spoken language', 'Business subject', and 'Community' with dropdown menus.

Figure 28: IBM Blue Pages Expert Directory Search

The results show a hit list of potential fits and then can be mined to locate the details on a specific expert.

Driscoll, Margaret
 IBM Global Services, IBM Business Consulting Services
 Human Capital Management, Learning and Development Consultant, Retail
 Cambridge, MA United States
 Building: 1RS | Floor: NA | Office: HOME

Local time: 11:39 | 11:39AM

My preferred contact method is e-mail

Add to: [Notes address book](#) [Sametime list](#) [My BluePages list](#)

Jobs & contact info | **Experience & qualifications** | Projects & teams | Communities & interests | Reporting structure | Summary

Expertise summary
 e-Learning, CVT, WBT, online learning
 Qualitative research
 Return on investment
 Competitive analysis

Use the links below to find articles, book chapters, and my book "Web-Based Training" from Jossey-Bass.
 Links: [Building Better E-Assessments](#) | [Ten Things We Know About Teaching Online](#) | [Web-Based Training: Using Technology to Design Adult Learning Experiences](#) | [Strategic e-Learning Plans from Scratch](#)

Biography / resume / CV
[Download biography / resume / CV](#)
 (88k, MS Word, uploaded 10 Mar 2004)

Certifications
IBM certifications
 Learning Profession

Additional external certifications
 Information Mapping

Report to chain
 ...
 ◊ [Bramante, James \(JAMES\)](#)
 ↳ [Brousseau, Denis \(DENIS\)](#)
 ↳ **Driscoll, Margaret**

Other reporting views
 • [Full report to chain](#)
 • [Same manager](#)

Figure 29: IBM Blue Pages Expert Directory Search Result

Since every employee is an “expert” at something, this type of system can be used in a narrow or very broad way. For a company such as IBM Business Consulting, all employees are listed in the expert directory and asked to keep their contact and expertise information current. One could imagine a solution where the skills and competencies in the expert directory are published directly from the LMS as employees complete learning and development assignments.

RSS: Personalization of Published Content

The third element of learning on demand is letting the content find you. Using a simple new technology called Really Simple Syndication (RSS), originally developed to let users “subscribe” to information which is pertinent to their needs. Once a user subscribes to a category of content, it automatically appears in their “news reader” – which may be email, a mobile device, or a web-page they visit.

The underlying technology for this approach is called RSS: Really Simple Syndication. RSS is a very simple web-based technology

which is widely available to any IT department or web-savvy developer. Using RSS technology learners can have new learning offerings and events automatically fed to their personal computer. Whenever a new article, finding, procedure, or learning offering is available, individuals who want it or need it can see it immediately.

This also meets the needs of learners to get “just what they need” to get their job done. One of the requirements for RSS is a content repository that has access to learning, news, information, help, and other assets. We see content management (LCMS systems) as one of the key new technologies that organizations will adopt as they implement learning on demand. (For more information on LCMS systems and the LCMS marketplace, please review our most recent research on the LCMS market at <http://www.bersin.com>.)

PodCasts: Personalization of Voice and Music

When you combine RSS technology and MP3 (music or voice) based content, we have what are called **podcasts**. A podcast is a powerful learning tool for the distribution of information, celebrity messages (ie. a message from the CEO), audio tutorials, and much more to come. We are just beginning to understand how to apply this easy-to-use technology to corporate training.

Approaching the Last Mile

In the telecommunications industry there is a concept of the last mile – the wire that takes the communications network into your home. In the application of learning technology, there is a similar problem. How do you get the learner to the last mile and *the precise answer or learning they desire*?

One approach has been the use of natural language processing: give the user the ability to actually ask a question and let the search engine find content that answers the question. Another approach is meta-tagging, which is tagging and indexing content so it can be referenced in many ways.

The bottom line is that this is an area where solutions are evolving. We believe that today, search tools do a fairly good job of getting you close enough and the human brain does an excellent job of browsing through search results to find the final, needed learning object. Over time, as search tools and XML tagging become more mature, the last mile problem for information and skills will get solved in new and better ways.

Here Today

Learning on demand can be implemented today. The technologies required to implement these solutions exist. The key is to evolve to this stage through the three stages shown above so that the

learning that is made available is relevant, integrated, and aligned with an organization's business problems and business strategy.

Conclusions: Using this Maturity Model

What is the value of this maturity model? This model has been developed through hundreds of interviews with training managers and executives. It is not just an idea – it is based on what really happens in the evolution of e-learning. To gain best benefit from this research you should map your current organization to the model to identify areas you can improve or plan for the future.

How can you use this evolutionary model to help plan and enhance the effectiveness and efficiency of your training investments? Consider where in this evolution you are today. Are you stuck at one point or do you see your organization naturally evolving to the next stage? Can you predict the problems, or challenges, or new investments you will need to make in order to move forward?

As these stages point out, at each level in the evolution, organizations deal with different business, technical, and organizational issues. Although we paint the picture of a steady process from stage to stage, many organizations will jump rapidly to Stage 2 or Stage 3 because of their experience and sophisticated process for dealing with new technologies.

Each of these stages drives higher and higher overall business value. We hope that by following this taxonomy and the research-based results in this study, you can predict, plan, and move your organization's learning forward more easily.

As this research shows, e-learning has evolved from a technology initiative into a truly integrated part of a corporations' learning and business processes. It creates a need for new approaches, new organizational models, as well as new technologies. We hope that this research helps you plan, budget, and implement a highly effective e-learning strategy for your organization.

Appendix A: Survey Demographics

Much of the data for this study was collected in the summer of 2005 in a broad industry survey. The demographics of this research are shown below. There were 526 total respondents.

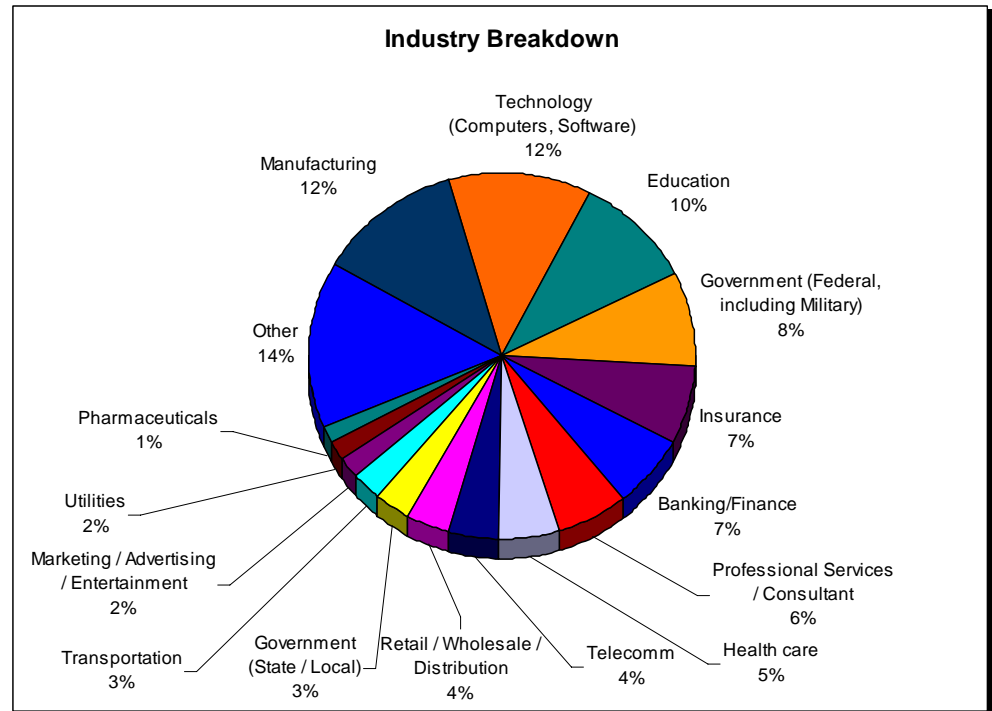


Figure 30: Industry Breakdown

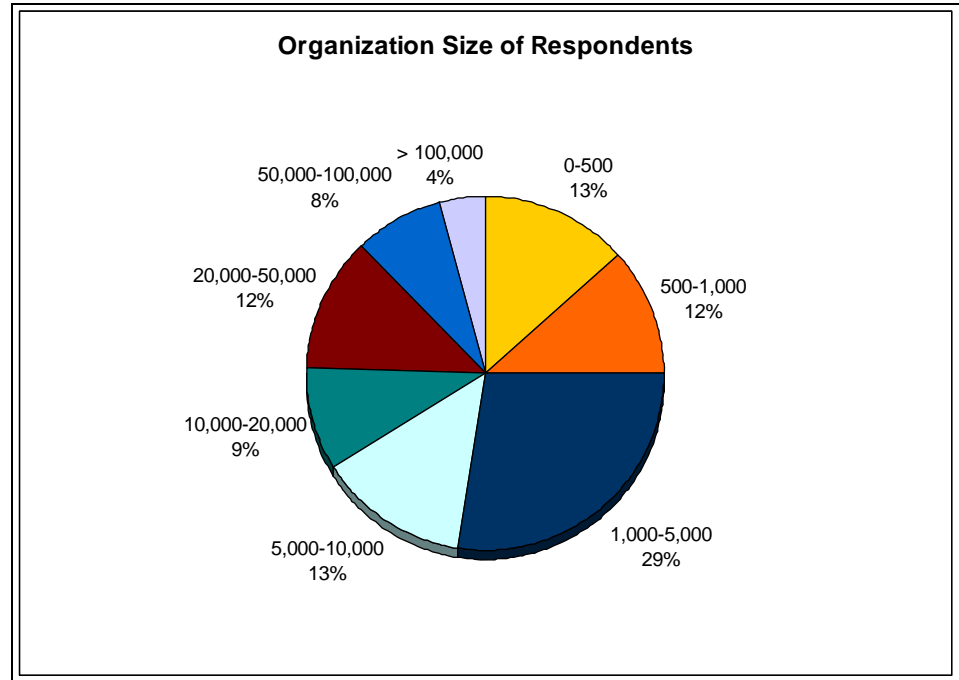


Figure 31: Organization Size of Respondents

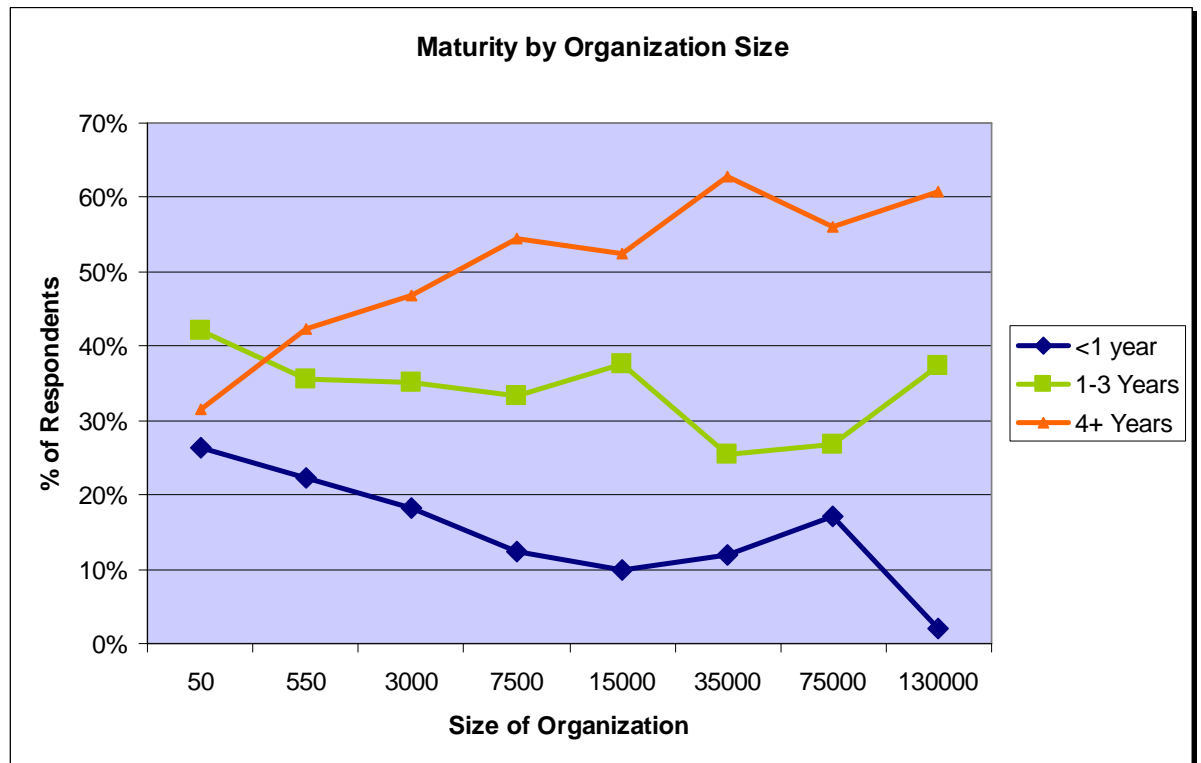


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