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A primer on e-learning...The framework, the market, the players

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By Stephen Abram

The process of knowledge creation is called learning. From the learner's perspective, the acquisition of knowledge—others' learning experiences, information, education and insights--happens in a variety of ways. The future of learning involves convergence of human processes, as well as of technology, including the convergence of knowledge management, content management, e-learning and collaboration, which will quickly transform our enterprises.

The process of knowledge creation and the process of learning are important sides of the same coin. Informing without learning is the equivalent of placing article photocopies and books on a desktop and not having them read. Learning without information or content is unlikely to result in progress and competitive advantage.

KM professionals who focus on content selection, design and delivery doom themselves to remaining information tellers, and their intranets to automated information machines. KM professionals who focus on the processes that underpin informing and learning empower their organizations and co-workers to survive and soar.

The term e-learning is fraught with many confusing definitions. The one that I find useful is from IDC (idc.com), which defines e-learning as: "synchronous or asynchronous learning that is conducted over Internet, intranet, extranet or other Internet-based technologies." That covers a lot of territory, so the purpose of this article is to provide a framework for you to view the various offerings we're seeing in the market.

E-learning outfits fit into three basic categories: content, infrastructure and services. Some organizations strive to provide one-stop shopping, but no one is there yet.

Content

The content part of the e-learning equation seems to focus on four areas, which are what some would call the low-hanging fruit of the business. They are:

- K to 12 school-oriented learning;;
- academic learning modules;;
- IT skills training and certification; and;

- soft skills, particularly business and management skills.;

E-learning, done well, is expensive to create. It also requires an understanding of learning pedagogy and the variety of ways that children and adults learn best. The rate of adoption in the education sector is quite high, so the quest to create courses and lessons that can be reused and combined in modules is an attractive one. Some pundits put the academic distance education market share at 50% of all post-secondary learning within seven years.

That creates a competitive framework that fundamentally challenges the revenue models of the higher education sector. Universities, colleges and trade school have to play just to stay in the game. Many, if not most, universities and colleges have e-learning programs as standalone distance education opportunities or as supplements to classroom learning. The academic sector's content concentration has been on courses in learning specializations such as medical training in health technology or courses in ancient civilizations. Academic libraries, for instance, have created many courses in the area of information literacy. That sector has been a keen adopter of course builder applications such as Blackboard, WebCT and Lotus LearningSpace to speed creation of distance education content. Other innovators in the content area have been leading textbook publishers, which are building complementary Web-based learning spaces and content for their print products.

Business-oriented e-learning tends to focus on IT and management competencies. IT is an obvious market for e-learning courses--either by software vendors to reduce the costs of training in an already computer-literate market, or by IT associations to accredit members in specific competencies, or for professional continuing education and continuous learning in a rapidly changing field in which practitioners must stay current. There are plenty of examples in that area, such as SmartForce (now merged into SkillSoft), Books24X7 or ProQuest Safari. It's one area where the e-book is nicely repositioning itself within the Internet learning space, complementary to the library reference space. Since IT books tend to be referenced and not read, they work well in learning environments.

With the coming baby boomer retirement bulge and the consequent loss of organizational and management knowledge within companies, smart organizations are searching for a way to make management competency learning opportunities available without sending employees out for expensive, continuous, external classroom training. Hence we see offerings of MBA-style content, redefined for the desktop user's problems. Examples of these include NewMindsets, Click2learn and SkillSoft. The creation of learning objects that mirror management challenges, such as in NewMindsets, is tantalizing as enterprises struggle with how to make the work force smarter while only delivering the "smarts" at the point of need.

Infrastructure

Learning management systems (LMS), at their most primitive level, are just learning portals that can be permissioned into your intranet. You select some courses and then launch them into your enterprise. On more advanced levels, you can integrate internal and external courses. In some cases, LMS rises to a learning content management system (LCMS), in which you can create courses within the LMS' learning paradigm. Examples of learning management systems are Saba, Click2learn and Thomson Learning's NETg.

A digitally stored and accessible PowerPoint presentation does not make for a wonderful learning opportunity by itself. However, a new class of presentation management system, such as BrainShark or Presenter, allows you to store PPTs with your voice or video synched with the slides. It's a big improvement over conference audiotapes; it allows people to replay or review sessions; and it allows those employees who weren't at the original presentation, like overseas or new employees, to get the basic learning.

There is also a new suite of authoring tools for e-learning creation. Some LCMS vendors provide

templates and outlines to ensure that you're meeting a minimum standard of presentation and pedagogy without having to invent from scratch. Add that to the emerging e-learning metadata standards, such as the Shareable Content Object Reference Model Initiative (SCORM), for tagging and describing e-learning content, and you've got an industry that is maturing quickly.

Another key initiative in the industry is the repackaging of traditional content such as books and articles into electronic coursepacks. They can be developed (and copyright cleared) for courses or even delivered at the individual lesson level. Each article, document or book can then be easily read, downloaded or even bought within the e-learning course. A leader in this area is XanEDU, which offers digital coursepacks and e-textbooks.

The real sizzle in the industry is building virtual learning environments that include many whiz-bang features. Going beyond the virtual classroom model and into true collaboration software, along with CRM and KM tools directly integrated into the learning management environment, creates exciting opportunities for modeling some of the best classroom education without travel and other costs to the enterprise. Cool collaboration and conferencing services such as WebEx, PlaceWare and Centra have been adopted by major LMS vendors.

Personalization of the learning experience is critical for most e-learning systems and to effective learning pedagogies. That can take the form of online competency tests, notebooks, assignments, discussions, online debates, polls, aptitude tests, etc. By allowing learners to discuss and reinforce their learning as well as to share it with their class cohorts (or with their supervisors and HR departments), the learner can prove progress in acquiring the skills the enterprise is demanding, while the employer can measure the impact of training and education on its strategic imperatives.

Services

A mini-industry is developing of e-learning and technical consultants who bring their early-stage experience to bear on e-learning and knowledge management strategies. Some specialize in personalized learning strategies or provide coaching and mentoring services. There are also external hosting services that reduce the cost of managing those services. Users don't need to load the whole system internally and can contract for the required levels of privacy and support.

Other spins

E-learning is a complex industry, but human learning is complex and diverse, too. Employees and students have arrived at their e-learning class with a wide diversity of needs, experience and learning styles. A wide range of PC, browser and information literacy in most organizations further complicates the situation. An organization cannot assume that its accountant's high MS Excel literacy skills translate into an easy transition to online learning. The best e-learning respects diversity and does not attempt to force students through a normalization procedure. The choices of the right blend of classroom, online or text-based learning are best left to the learner and to education and training professionals.

And, yes, those who practice professional skills for global organizations or markets have additional challenges with respect to international delivery and the issues of culture and language translation.

The challenge

The challenge of e-learning is finding the model(s) that will work—that actually improve learning, improve the intelligence of an enterprise, bridge the communication gap and provide proof of the effectiveness of their systems and products. Educational researchers have been seeking that Holy Grail for years.

The focus for the past half-century has been on the theories of multiple intelligence and learning styles.

Those theories have been used to improve course curricula, textbooks, teacher guides and even video games. The hypothesis is that educational designers should strive to match the learner's preferred intelligence and learning style and comfort level with each point in the complexity curve as he or she learns increasingly more difficult content. If that is accomplished, the learner will be more successful at acquiring the skills and competencies desired through the learning process. As each scaffold to learning each competency domain is built, the learner has a platform to build increased skills that are of value to the employer, enterprise, society or market.

The great thinkers in that arena are Jean Piaget, Benjamin Bloom and Howard Gardner, among others. Ultimately (and simplistically) people have a variety of thinking and learning styles that fall roughly into these categories: visual/spatial, verbal/linguistic, musical/rhythmic, logical/mathematical, bodily/kinesthetic, interpersonal and intrapersonal. (See sidebar for more details.)

The actual activity of learning can be enhanced by making sure there are a variety of modes to learn. Those types of learning methods include:

- perceptual learning,;
- stimulus-response learning,;
- motor learning, ;
- relational learning, ;
- spatial learning,;
- episodic learning, and;
- observational learning.;

(KM pros will recognize Bloom's taxonomy as the "Knowledge—Comprehension—Application—Analysis—Synthesis—Evaluation" continuum, which we deal with daily as the virtuous cycle.)

Don't forget the human factor

In other words, a series of PowerPoint slides on a Web site is not good (or even adequate) e-learning. It won't move your enterprise or learners forward or higher any more than the lecture method did for learners in other educational environments. Learning theories underpin the many decisions you will make with respect to e-learning. They affect the design of the interface(s), the alignment of the course pedagogy with the learner market(s), the distance education paradigm you choose to use, and much more. Focusing on the learner and his or her personal attributes, as well as the enterprise needs for learning and competitive competency development, will win in the long term--for the learners, e-learning vendors, content developers and buyers.

Any e-learning practitioner, developer or vendor who ignores the human factor in learning and the intensity of individual learning differences is destined to fail. Spend some time investigating the research from the world of education and you will be rewarded. People don't easily fit into any one pigeonhole--everyone has his or her own amalgam of styles, intelligence and experience.

The framework described in this article changes every day. E-learning companies are merging. Course vendors are licensing collaboration software. E-book publishers are being bought up by learning portals. But the learner is still a human, usually a student or employee, and the learner still has needs. We have

great tools closer to reality now, so let's take advantage of them.

B>What should the KM practitioner do?

- Focus on second-generation e-learning—where there is more than a codified course and users direct their own learning.;
- Focus on the “learning ecology” and ensure that the technology doesn’t get in the way of learning, but rather enhances it.;
- Understand how blended e-learning works--combining e-learning with face-to-face learning and offline practice.;
- Acquire e-learning as learning nuggets that are developed in combinable learning paths and are accessible, as the learner defines them, through metadata-driven customizable paths.;
- Focus on alliances with content providers, learning and HR pros, technology people and KM and strategic leaders.;

E-Learning World SIDEBAR:

Learning styles

Ultimately (and simplistically) people have a variety of thinking and learning styles that fall roughly into these categories:

- visual/spatial, ;
- verbal/linguistic, ;
- musical/rhythmic, ;
- logical/mathematical,;
- bodily/kinesthetic, ;
- interpersonal, and ;
- intrapersonal.;

"Picture smart" people are said to have spatial/visual intelligence. They think in images and pictures and can find clear, visual images and representations to communicate abstract thoughts. They know the location of everything and have a fascination with machines and contraptions. You find them successfully engaged in careers as inventors, architects, engineers and mechanics.

People showing linguistic/verbal intelligence are labeled as "word smart." Thinking in words and with highly developed auditory skills, they play with sounds in language and are great storytellers. They love seeing, saying and hearing words, and their heads are frequently stuck in a book. They like to write and are often employed as teachers, journalists, writers, lawyers and translators.

Some people (even non-musicians) are "music smart," showing musical/rhythmic intelligence. By

thinking in sounds, rhythms and patterns and responding immediately to music and sounds or tone, they perform and appreciate music but are also sensitive to environmental sounds. People with this type of intelligence can excel in choirs, orchestras, bands, theatre or as disc jockeys, and they can be associated with public performance and mathematics.

Some folks are "number smart," demonstrating strength in the area of logical/mathematical intelligence. Valued highly by western society, they think conceptually and are skilled in reasoning, logic and problem solving. They effectively explore patterns, categories and relationships. Possible careers include science, engineering, computer programmers or accountants.

Bodily kinesthetic intelligence or "body smart" people process knowledge through bodily sensation. They have excellent fine-motor coordination and can be driven by gut feelings about things. These people can be great at mimicking mannerisms and may need to move around to think. They might be labeled hyperactive, and can excel at careers as athletes, dancers, actors, mimes or clowns.

Some individuals are "people smart," displaying strong interpersonal intelligence. They think and process input by relating, cooperating and communicating with others. They can be leaders among peers and have an uncanny ability to sense the feelings and intentions of others. They can be experts in understanding people and mediating conflict. Some tend toward careers as counselors, businesspeople, politicians and community organizers.

Intrapersonal intelligence is referred to as "self-smart." The people are skilled in inner focusing and display a strong personality. They have a deep awareness of inner feelings, dreams and ideas and are reflective and analytical. They can shy away from team activities but do recognize their own strengths and weaknesses. They are often self-employed or work as researchers, theorists and philosophers.

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Creating and Managing the Knowledge-Based Enterprise

Learn vocabulary, terms and more with flashcards, games and other study tools.Â To deter a potential entrant, an existing firm in a market may threaten to sharply increase production so that the entrant will be left with a small share of the market. This may be a credible threat if: A) production exhibits economies of scale. B) production exhibits diseconomies of scale. C) production costs may fall due to learning-by-doing. D) A and C are correct. E) B and C are correct. E. To deter a potential entrant, an existing firm in a market may threaten to sharply increase production so that the entrant will be left with a small share of the market. As e-Learning technologies become increasingly utilized for educational courses, issues related to standardization for reusability and interoperability, assurance of quality, and prevention of adverse effects become crucial. Therefore, national standards for e-Learning were developed; a prime example is the enactment of the Korea Educational Metadata (KEM).Â To enable quality control of e-Learning, the E-Learning Quality Assurance System (EQAS) was established using such criteria as content, service and platform.Â Survey of E-Learning Demand Market in the Republic. of Korea Table II-3. Cyber Universities Table II-4.