

Competition In The eLearning Industry: A Case Study

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ABSTRACT

This paper highlights the structural attributes of the eLearning Industry. The case presents details regarding the evolution of the eLearning market and provides the opportunity for students of strategic management to build critical industry analytical skills by applying a variety of techniques highlighted in the accompanying case teaching note. To obtain a copy of the teaching note, contact the corresponding author by email. The analytical techniques applied include the identification of the chief economic characteristics of the industry, Porter's five force model of competition, the impact of driving forces on industry structure, and the identification of necessary competitive capabilities (success factors) for success in the eLearning industry.

THE eLEARNING INDUSTRY IN 2001

The delivery of a learning, training, or education program by electronic means is essentially the purpose of products developed by competitors within the eLearning industry. eLearning involves the use of a computer or electronic device (e.g. a mobile phone) to provide training, educational or learning material. eLearning can involve a greater variety of equipment than online training or education, for as the name implies, "online" involves using the Internet or an Intranet. While CD-ROM and DVD have been used for many years to provide learning materials, eLearning, as a component of flexible learning, provides a robust set of applications, processes and content to deliver vocational education and training on an anytime/anywhere basis through the Internet and the World Wide Web (WWW). eLearning includes computer-based learning, web-based learning, virtual classrooms and digital collaboration and uses. Online or web-based learning (learning via the Internet, intranets and extranets) is increasingly understood to be a subset of eLearning (technology supported learning) and would be considered the major focus for organizations currently competing for space in the LCMS (Learning Content Management Systems) market.

The landscape for technology supported learning has shifted considerably over the last few years. As the technology of the internet has given companies the ability to rapidly create and deploy training to global audiences, leading-edge companies are seeking increasingly advanced solutions to bring their mission-critical training to the Web. We're in the midst of an eLearning revolution, which brings with it rapid change, a myriad of emerging technologies, an incomplete and competing set of standards, and greater opportunities to generate significant business returns on eLearning investments.

This rapid change, shifting functionality and standards, along with the proliferation of products can be confusing to organizations that are looking to implement eLearning solutions. In addition to the confusion over products, consumers of eLearning offerings are becoming smarter and more mature. Where once satisfied to be at the mercy of vendor "push" solutions, companies looking at eLearning solutions are now more knowledgeable regarding the features, functions, costs, and benefits of technology, and are actively looking for technology solutions that provide measurable business benefits. As technologies have evolved, the benefits available to those investing in eLearning have become more profound and quantifiable. The ability to deliver complete eLearning solutions that can spread business-critical, common body and proprietary knowledge across an extended enterprise not only

increases the effectiveness of the learning process for individuals, but also generates significant ROI through training cost reductions and increased business performance. Indeed, today's most advanced eLearning solutions are those that deliver knowledge positively impacting an organization's bottom line.

Many consumers of eLearning systems desire a complete, "cradle to grave" solution that encompasses all aspects of the learning process as well as the tight integration of the learning systems with a variety of back office human resource (HR) and customer relation management (CRM) systems. Beyond the software to facilitate learning, many eLearning consumers require content development services, secure, off-site application hosting services, learning scheduling, tracking systems, employee and customer certification systems, and performance evaluation systems. To be successful, eLearning companies must simultaneously navigate both product and services based business models.

Market Size And Growth

As companies around the globe strive to produce just-in-time products to stoke the economy and compete for cost-effectiveness and efficiency, eLearning is moving to the forefront to meet the training needs of an ever-changing world. Employees need to know how to integrate new technological advances into the workplace. With two-thirds of corporate training budgets comprised of travel expenses alone, managers are turning to eLearning to reduce costs and increase the scope and potential of their training programs. The training and education sector represents \$772 billion, or 9% of the GNP, second only to health care, according to WR Hambrecht & Co., a full-service brokerage and underwriting firm for high-tech and emerging-growth companies. According to Screen Digest, the U.S. Corporate eLearning market represents \$3.5 billion (\$5 billion globally) with the market predicted to reach 50 billion by 2010. WR Hambrecht estimates that the overall revenues to be generated within the U.S. corporate eLearning market will reach \$11.4 billion by 2003, completing a 5-year CAGR of 83.4% (See Table 1). Within the eLearning market, the segment for Delivery Systems, meaning software systems designed to facilitate the delivery of on-line learning, is targeted to reach \$1.1 billion by 2003, with a 5-year CAGR of 79.7%. Suppliers that thrive in the eLearning age will play on all three fronts -- content, technology and services -- and will deliver a complete eLearning solution. Suppliers that expand their offerings or partner with others are most likely to make it to the next level. Given the rate and types of change within these provider areas it is clear the eLearning environment represents a classic high velocity market.

A commonly cited example of how eLearning can directly help a firm thrive in dynamic environments is for product rollouts. Firms that have spent significant time and resources developing a new product line or making significant changes in an established one have a vested interest in ensuring that their sales and marketing teams have been properly educated about the nuances of the new/changed product. This education helps to ensure that the marketing messages from the company are consistent, uniform and in step with the company's overall product strategy. Obviously, using eLearning as a tool to enhance an organization's knowledge of new products will have an enormous impact on the success of product activity and the company's bottom line.

Table 1: U.S. Corporate eLearning Revenues by Offering (\$MM)

	1997	1998	1999	2000	2001	2002	2003	1997 to 2003 CAGR (%)
Delivery Systems	21	61	178	356	567	782	1,142	79.7
Learning Services	44	99	201	533	1,216	2,418	4,109	110.7
Content	170	391	735	1,333	2,270	3,912	6,164	73.6
Total	235	551	1,114	2,222	4,053	7,112	11,415	83.4

With the harried pace of business, employees must have critical thinking skills to identify process improvements, work as an effective team, and change processes critical to the success of product strategies. The average employee will switch jobs many times in his or her lifetime — more than seven times is probable. Thus the need to learn new information and new processes is unlikely to abate. In spite of this trend, more than 40% of the

labor force performs at the two lowest levels on government literacy scales, suggesting that workers lack the skills needed to interpret, integrate and compare information. The growing divide between what is needed in today's economy and what skills our workforce has seems to be wide and deepening. The growth of the Internet is bringing online education to people in corporations, institutes of higher learning, the government, and other sectors. Online learning moves access to education as close as one's PC facilitating education on both an anytime/anywhere and just-in time basis.

DRIVERS OF THE eLEARNING INDUSTRY

Like all industries in the *New Economy*, the eLearning industry is growing at Internet speed and is affected by the same growing pains as other "e" entities in the marketplace. The drivers that create this momentum fall into three major categories: economic, corporate, technology and learner-centric.

Economic Drivers: The Knowledge-Based Economy

Numerous financial reports, books on best business strategies and periodicals, emphasize characteristics of the *New Economy*. Organizations have moved from the Industrial Age, to the Information Age, to the Knowledge Age. Information is everywhere; it can overwhelm an organization by its sheer volume and need for careful management, protection, storage, retrieval and processing. Yet, what organizations do with that information may be the key factor determining their survival. Knowledge about customers' drives the products that are developed; this knowledge and experience often differentiates an organization from its competition. In order for organizations to capitalize on that opportunity, they will need to be capable of moving quickly. "Business at Internet speed" is a phrase often used to describe today's work pace.

Shortage Of Skilled Workers

Yet, in the midst of this technology, information and potential access, the U.S. is facing a shortage of skilled workers. This is also a global problem. PricewaterhouseCoopers states that 70% of the world's 1,000 top-tier companies cite the lack of trained employees as their number one barrier to sustaining growth. With the rapid rate of growth, workers must be continuously retrained in order to remain current and to help organizations thrive in the *New Economy*. Organizations face the challenge of ensuring the quality and quantity of this training and managing its cost.

Department of Labor statistics show that occupations requiring a college degree are growing twice as quickly as others. By 2006, almost half of all U.S. workers will be employed in industries that produce or intensively use information technology products and services. In the U.S. alone, one out of every 10 computer-related positions, or approximately 350,000 jobs, are unfilled.

Technology – Enabler And Driver

Whether an employee's role is in sales, marketing, accounting, operations or customer service, they will need to use a changing knowledge base while making decisions on a daily basis. The challenge for both technology and businesses today is capturing information and building useful and meaningful databases that can be integrated throughout the organization and whose contents are retrievable when and where needed. Both information technology and telecommunications are driving the need for eLearning while at the same time creating the means to accomplish it.

Corporate Drivers Of eLearning

The Corporate University

Since knowledge is viewed as a corporate asset, training must be seen as both a strategic initiative source of competitive advantage. One sign that training has come of age is the advent of the corporate university and the CLO

(Chief Learning Officer). In many cases, the CLO reports to the chief executive officer, is a lateral position to the chief financial officer and participates when the executive team plans future strategy. In 1988, there were approximately 400 corporate universities. Today there are approximately 1,600, and if the trend continues, they will exceed the number of traditional universities in the U.S. by 2010. In addition to training employees, corporate universities are also becoming profit centers that are responsible for training a corporation's complete ecosystem or supply chain — including customers, partners, channel partners and suppliers.

The Global Economy

Since corporate employees around the world work either from the office or home, learning resources and knowledge databases must be available 24/7. Language and cultural differences, sometimes called localizations, also must be taken into consideration. By using a corporate intranet, employees can access eLearning content whenever they need it. The eLearning industry must offer solutions that are simultaneously anytime/anywhere and dynamically customized to the local region in which the learner resides. Some suppliers in the eLearning space have been working to establish a global presence.

In addition to the 24/7 need described above, the nature of the learning need continues to evolve. While traditional course formats are still the backbone of corporate training systems, many companies are exploring knowledge management systems that provide the employee training on a Just In Time (JIT) basis. Such JIT training tends to be much shorter than traditional courses and is driven by an immediate employee training need resulting from their daily work.

Time-To-Market

Time-to-market is also a major driver for organizations. For a global company launching a product and needing to reach thousands of sales, support, and management professionals who are decentralized -- perhaps around the world -- instructor-led training just can't provide the speed necessary to maximize return on investment. The product may be available for sale, but if salespeople are not fully informed, a company's message to stakeholders can become fractured and inconsistent. This mixed message may provide the attentive competitor the opportunity to erode an organization's competitive or market advantage. Product development cycle times are diminishing most visibly in technology based industries along with increasing consumer expectations regarding better functionality at lower costs. Field organizations within high-tech companies experience a tremendous amount of pressure to keep up with the constant barrage of new product lines, new industry standards, market and competitive analyses. Resolving any enterprise-wide issues via eLearning strategies and tools will quite often provide the greatest visibility and the most substantial rewards.

Cost Savings

According to *Training Magazine* corporations save 50% to 70% when they replace instructor-led training with electronic delivery. Housing and travel costs account for the majority of the savings. Lost productivity and revenue can actually be higher if you consider that classroom days include not only travel time, but also total time away from the office. Additionally, learning through the use of modular units that can be provided electronically not only breaks the learning into more manageable pieces but allows students or employees to spread out training over a period of several days.

Finally, while some information will be retained immediately following a course, over longer periods of time, knowledge retention dissipates. The Research Institute of America found that 33 minutes after a lecture is completed, students usually retain only 58% of the material covered. By the second day, 33% is retained, and three weeks after the course is completed, only 15% of the knowledge is retained. eLearning provides an opportunity for the learner to revisit the material when it is needed.

Technology And Learner Centric Drivers

Consistency

Instructor-led training does not guarantee that the same information or quality of instruction is provided to all students. Class dynamics can often provide different outcomes on the topics covered and/or emphasized. Instructors and students engage in the class with differing levels of competency about the topic. This inconsistency presents a challenge to management when evaluating the skill set and competencies of employees.

Training Magazine reported 50% to 60% improved consistency using some form of eLearning. Because business moves at Internet speed, content needs to be updated frequently to avoid obsolescence. The scalability of eLearning allows one course to train thousands of students, as opposed to the ratios of 1 to 20 in more traditional classes. Both consistency of information and content integrity can be maintained efficiently.

Because of the improved consistency with eLearning it is easier to achieve and measure continuous improvement within the learning environment. Since there is only one copy of the material to be covered, improvements in that material are immediately and uniformly delivered to the learner. eLearning also typically provides a detailed activity monitoring of the learner; this monitoring can be used in refining the materials offered.

Time Savings

Depending on the complexity of the topic and the individual skill level, some students will learn faster or slower than others. eLearning allows students to learn at their own pace. The slower student can review course material as often as necessary, redoing exercises or simulations until the information converts to knowledge. An average of 50% time savings has been found when comparing time-to-learn in a classroom versus on a computer.

Compliance Training

If an industry is regulated, the importance of being able to provide timely, consistent and accurate training for employees is crucial. The ability to assess and track the results of perhaps thousands of employees/students is also mandatory. Failure to do both might result in expensive fines and settlements from lost lawsuits.

Many of these industries have ongoing certification requirements for firms and people that work in the area. While the certification requirements vary tremendously from industry to industry, from region to region, and from job to job, such certifications are typically administered by an external industry-level or governmental organization. Certifications frequently are renewed annually, based on a fixed number of hours of training (typically called Continuing Education or CE credits), and may be tied to the successful completion of an exam.

Fortunately, there are a combination of eLearning content, tools and vendors to assist in maintaining the records necessary to track employee's training and certification. Vendors are beginning to specialize in providing compliance training to the insurance, banking, securities, health care, law and real estate professions. For example, one vendor in this field is eMind.com, which offers a "Knowledge Portal" to attract and serve financial professionals.

EVOLUTION OF THE eLEARNING INDUSTRY

During the early years of the development of the eLearning industry, the corporate and high education markets developed simultaneously but mostly independently. The systems, needs assessments, and solutions developed for one were not considered or shared by the other. This resulted in much needless duplication. While the corporate and higher education training needs are not identical there is certainly much commonality that can be leveraged. As the eLearning industry has matured this duplication of effort has been reduced. By late 1999 many eLearning companies started to cross the corporate/higher education barrier.

Traditional eLearning offerings are typically characterized by long, expensive development cycles and rigid formats and processes. Many higher education clients and several large corporate markets require lean, flexible solutions with a heavy emphasis on automated certification that must be deployable quickly and without highly-skilled technical resources or comprehensive infrastructure. Consequently, the market can be viewed as moving through several evolutionary changes based in large part on technology progression and the need for speed, content ownership, cost, flexibility, and business benefits (education and corporate) of eLearning solutions. Four stages of eLearning are provided in Table 2 and summarized below.

Stage 1 – Generic Content Libraries

Companies like Element K, Smartforce, and Skillsoft pioneered the development of large, general purpose, corporate content libraries tailored to hard skills material. Initially, the demand for courses was in the areas of Information Technology training (Smartforce, Element K); later soft skill courses were added including training in project management, leadership, and team development (Skillsoft).

Table 2: Stages of eLearning Development

	Stage 1	Stage 2	Stage 3	Stage 4
Major eLearning Technology	Generic Content Libraries	Learning Management Systems	Content Services Providers	Learning Content Management Systems
Control of Learning Technology	Third Party Vendors	Centralized Corporate Control	Third party Vendors	Decentralized Corporate Subject Matter Experts
Speed of Implementation	Rapid	Slow	Slow	Rapid
Benefits	Important Generic Content such as IT training and project management are widely available	Centralized planning and accounting for all types of learning; linkage to job categories and performance objectives	Hosted content services providers eliminate need for internal systems expertise	Proprietary content can be easily and rapidly created, deployed, tracked, and managed across extended enterprise
Limitations	No proprietary value to organizations. Learning cannot be linked to business results	Extremely long implementation times	Designed content can be owned by vendor, rather than company. Extremely high costs for deployment, evolution and maintenance.	
ROI	Difficult to Measure	High expense of implementation limits ROI; ROI focused on administrative efficiency rather than benefits of actual distributed learning	High ongoing expense of services limits ROI	Significant ROI via linking learning to business performance; Minimal services costs increase ROI over time

The benefits provided by these content libraries were enormous. Employees could quickly acquire a commonly encountered new skill such as programming, MS Office applications, or general purpose project management skills, and could take a web-based self-study course immediately. These libraries also eliminated the need for distribution of CD-ROM's or paper manuals as resource materials. A learner did not need to wait until the course was available in a classroom format, either within a company, at a local college, or offered by a training provider.

Companies who wished to utilize distributed eLearning for more company-specific content still needed to go outside of this system to develop courses, generally using the services of a content development firm, adding to the expense of delivering a wide range of training solutions. The development of such customized material was slow, expensive and difficult to maintain. Frequently, organizations did not have the necessary skill set on staff to develop high quality eLearning content. External, specialty content development vendors proliferated. The quality, consistency, correctness, and completeness of the content developed were uncertain and unpredictable.

Stage 2 – Administration-focused Learning Management Systems

Once companies became aware of the potential for technology-based learning delivered on the internet, a second class of systems evolved in the marketplace. Learning Management Systems (LMS) enable companies to plan and track the learning needs and accomplishments of employees, customers, and partners. As the “accounting system” for learning, a LMS (SABA, Docent, or Knowledge Universe) links strategic organizational goals to employee jobs and competencies. A LMS provides a catalogue of all courses, books, and training events available (and relevant) to a learner, delivered in any format, live or via eLearning. The system also has the ability to register learners for live courses, facilitate the booking of hotel rooms, or the ordering of a videotape, and charge the expenses to the appropriate cost center. These systems typically provide a scheduling mechanism for the courses, a tracking system for course completion and needs for the employee, and a bridge between a training function and the rest of the organization.

The promise of the LMS is to enable companies to plan, control, and manage the critical resources essential for learning, and to focus learners on those skills needed for their specific work. Along with this promise comes considerable complexity: before deploying a LMS, companies needed to translate strategic goals into learning competencies, link competencies to job categories and classifications, and link these to learning events and resources. Unfortunately, a substantial corporate-wide analysis that often took months or even years to complete was necessary for the LMS to provide “real” value. Once the software was deployed, the results from learning needed to also be integrated into existing ERP (enterprise resource planning) or Human Resource systems.

Consequently, the time and expense of LMS implementation is high, usually requiring extensive use of highly paid consultants. In companies where policies and strategies are specifically tailored to division or business unit strategies, the LMS had to be further customized. The LMS implementation requires not only systems customization, but also requires systems integration (with employee information systems), change management (to enable acceptance of a new system), extensive user training (for those administering the system), and internal IT support. Implementation time periods are lengthy, and the real benefits from the LMS are often not apparent for several years. Companies frequently find the time, complexity, need for integration with existing systems, and expense of implementing such systems to be daunting.

Many organizations with extensive, well-established classroom training functions can use the LMS primarily for managing face-to-face training and enroll and manage student learning. Finally, most LMS “launch” custom or generic eLearning courses, but do not provide any mechanisms to easily create and deploy internally developed courses based on a company’s proprietary knowledge base.

Stage 3 – The High Cost Of Outsourced eLearning Platforms

Recognizing the inability of many companies to create and deploy eLearning courses with proprietary content, companies like Digital Think provided a platform and services that take a company’s learning content, and create web-based courses. While this type of solution may be of great benefit and provide competitive advantage to larger companies with many employees and customers to train, these types of solutions do not enable their purchasers to get sustained benefits from their eLearning investment. Because of the dependence on vendor services, organizations using these platforms lack the capability to quickly change content. Companies also do not gain the capacity for learning how to deploy proprietary content using internal resources. Finally, many companies using these vendors do not have ultimate ownership of their course materials, which, once developed in a web-based

format, become the product of the vendor. Lack of ownership of the content can be problematic when the knowledge embedded in the eLearning course is a source of competitive advantage.

Stage 4 – The Deployment Of Learning Content Management Systems (LCMS)

The most recent development within the market for eLearning solutions carries both the most profound business benefits as well as the lowest cost of ownership for companies that deploy it. LCMS encompass much of the advantages from the previous 3 stages into a single package; within most commercially available LCMS are content development and management facilities, class and course management features, and learner-centric progress checking and certification features.

These types of systems are designed to enable subject matter experts, with little technology expertise, to design, create, and deliver eLearning courses in extremely rapid time frames. LCMS fundamentally changes the value of the economics for eLearning content delivery by offering organizations with a highly scalable platform the means to deliver high impact, proprietary knowledge for individual learners without bearing a prohibitive cost burden. An LCMS can be deployed across an entire enterprise, or within a business unit, and learner results can be linked to enterprise information systems. Users can create, control and manage content, learners, and courses, and rapidly update information as it changes. Versioning of content within an organization becomes easy to do and is naturally supported by LCMS. Products in the education market that reflect LCMS solutions include Blackboard and WebCt.

The LCMS also can provide certification and tracking for individual learners, where specific knowledge must be certified for regulatory needs, professional licensure, or quality control. Companies such as medical device manufacturers can utilize an LCMS to ensure that all sales staff are fully trained on the processes in a new medical device, and provide certification results to the FDA. Insurance agents, or financial professionals can track compliance with continuing education and licensing requirements. Manufacturing organizations can use the capabilities of an LCMS to track employee learning and performance on OSHA regulations.

An effective LCMS also takes into account that all organizations create and deploy learning in different ways, and must maintain the flexibility to incorporate these differences. For example, a large global enterprise that sells and services multiple types of products may have unique requirements for training and learning depending on the product, service, or country in which they are doing business. The LCMS must provide for different types of materials, learning methods, and time frames for learning. The fundamental business advantage for organizations that invest in LCMS solutions comes from the ability to create and share internal proprietary knowledge of products, services and processes, at a fraction of traditional costs. As opposed to traditional generic content training, scalable, effective delivery of proprietary knowledge allows large organizations to innovate and grow. The key building blocks for an LCMS platform are provided in Table 3.

Table 3: Building Blocks of an Enterprise LCMS Platform

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| 1. | Ease of content creation and delivery |
| 2. | Flexibility of Course Design and Delivery |
| 3. | Reusable Learning Objects |
| 4. | Administrative applications that manage learners and courses |
| 5. | Assessment of Learning |
| 6. | Open Interface with LMS or other ERP Systems |
| 7. | Communications and Collaboration |
| 8. | Enterprise Security |
| 9. | Facilities for Content Migration |
| 10. | Automated Implementation Processes |

RECENT DEVELOPMENTS, COMPETITORS, AND COMPETITION IN THE LCMS SEGMENT

During the past 18 months, several established LMS software providers (such as [Microsoft and IBM/Lotus] have added LCMS functionality as the front-end to their administrative offerings, either via internal development or external acquisition. The addition of LCMS to traditional LMS offerings has resulted in several vendors offering comprehensive enterprise eLearning suites to support the long term eLearning strategies of large organizations with a reasonable adoption and deployment effort, cost and time.

The LCMS market can still be characterized as being in a “pre-growth” stage. In many cases, inflexible content delivery structures do not align with evolving training strategies. This results in cost overruns, lengthy implementation times and poor customer satisfaction. Also, as larger clients adopt LCMS technology, problems are being reported with the scalability of applications and with security deficiencies. For organizations whose viability depends upon formal certification, or who lack the resources or infrastructure to support large-scale eLearning strategies, or for organizations that require rapid deployment, these solutions fall woefully short.

The pure LCMS companies tend to be small, recently-formed, under-funded and lacking important maturity. This presents a variety of opportunities for the organization that can get ahead of competitors on key success factors in this highly fragmented industry. However, most current competitors have experienced negative cash flows to date and there are concerns about the road to profitability. Most of the competitors are required to obtain funding from outside sources such as venture capitalists. These sources of funding in turn present a myriad of challenges to the organization from both a business model and a managerial perspective.

The comments below were compiled from each competitor’s website.

Saba

- A provider of Human Capital Development and Management solutions
- Customers around the world leverage Saba global capabilities to develop and manage their people.
- Moving the enterprise. Moving minds.

Saba is a leading provider of Human Capital Development and Management (HCDM) solutions that consist of Internet-based learning, performance, content and resource management systems, business-to-business exchanges, integrated content and related services. Customers around the world rely on Saba for human capital development and management infrastructure to increase competitive advantage by rapidly building critical skills throughout their extended enterprise of customers, partners, employees and suppliers

Docent

- A provider of eLearning software

Docent, Inc. (Nasdaq: DCNT) is a provider of eLearning software for Global 2000 companies. Docent creates business advantage for organizations by delivering the right knowledge to the right people at the right time. Docent Enterprise™, which includes the award-winning Docent Learning Management Server™, Docent Content Delivery Server™, Docent Outliner™, and Docent Mobile™, provides a complete infrastructure for developing, delivering, managing, and measuring eLearning. Docent's customer list boasts more than 180 companies, including 11 of the Fortune 50. Among global systems integration firms with which Docent has alliances are Accenture, Deloitte Consulting, Hewlett-Packard, and PricewaterhouseCoopers.

DigitalThink

- Smart companies get it.
- A provider of eLearning business solutions.
- One of the top providers of eLearning business solutions to Global 2000 companies

- Sets A New Standard With The Introduction Of Its Next Generation, Industrial-Strength DigitalThink ELearning Platform

DigitalThink, Inc. is a leading provider of eLearning business solutions to Global 2000 companies, delivering measurable business results through its award-winning content and powerful eLearning platform. The company's completely hosted, 100% Web-based solutions are tightly aligned with strategic business objectives, provide a highly engaging learning environment, and include powerful management tools to measure learning effectiveness and return on investment (ROI). From workforce development to sales force effectiveness to customer acquisition and retention, DigitalThink eLearning has delivered bottom-line benefits to smart companies such as Charles Schwab & Company, Circuit City, Cisco Systems, Deutsche Bank, EDS, The Gallup Organization, GE Capital, KPMG Consulting and Sun Microsystems.

WBT Systems

- Powering the eLearning Revolution
- eLearning solutions to rapidly create, deploy and manage online learning content
- One of the world's leading provider of learning content management and delivery solutions

WBT Systems' TopClass family of products powers the eLearning revolution with solutions designed to create, deliver and track learning content to speed time to performance and reduce costs across the extended enterprise. The company has the largest customer base of any Learning Content Management System with hundreds of thousands of users worldwide across organizations like Nokia (BUE:NOKA.BA), Dow Chemical (NYSE:DOW), ST Microelectronics (NYSE:STM), Credit Suisse, Belgacom, and PricewaterhouseCoopers. With headquarters in Massachusetts, the company has major offices in Europe and the United States and can be found on the Web at www.wbtsystems.com.

MindLever/Centra

- Redefining eLearning and Collaboration
- Blended eLearning

Challenged to increase organizational efficiency, improve productivity, and shorten time to market, more companies and universities are turning to Centra to help them achieve business results through internal and market-facing applications of live eLearning and business collaboration.

With over 1.3 million users worldwide, Centra is one of the world's leading provider of software infrastructure and ASP services for eLearning and business collaboration. Today hundreds of global organizations have standardized on Centra for live eLearning, including Accenture, Century 21, Domino's Pizza, EMC Corporation, Siemens, Sony, and Procter & Gamble. Centra supports a vital ecosystem of strategic eLearning partnerships, which include alliances with PricewaterhouseCoopers, Deloitte Consulting, EDS, Microsoft, Cisco, Oracle, Saba, Docent, Global Knowledge, and 27 international value-added resellers covering 29 countries. Headquartered in Boston's technology corridor, the Company has sales offices throughout North America, Europe and Asia. For more information, visit <http://www.centra.com>.

On Adding MindLever LCMS To Centra Offering:

The combined MindLevel/Centra is the first to provide a truly integrated solution. Mindlevel/Centra offers a blended eLearning platform that combines live interactive sessions with access to self-paced, task-specific content provide the most powerful and cost-effective learning solutions.

With this combined product offering, organizations will be able to extend the power of their Centra eLearning solution by adding the ability to index business content for easy retrieval, on-demand access to extensive multimedia knowledge directories of learning content in industry-standard (SCORM-compliant) formats, and

personalized eLearning programs. The extended capabilities of the Centra eLearning infrastructure will enhance the value that Centra already provides organizations - the ability to rapidly and effectively deliver knowledge to employees, customers, and partners to improve business performance.

LeadingWay Knowledge Systems

The fastest way to create productivity is to give people the knowledge they need, when they need it. LeadingWay solutions help organizations capture, manage and distribute knowledge through the channels people turn to for real-world learning. Our products are the first to integrate training, performance support, communications and knowledge management functions to accelerate the building of expertise that leads to productivity.

While the market appears to have high growth and profitability opportunities there appear to be several organizations that have the capabilities to move into the LCMS portion of the market. This can be accomplished as a result of mergers or acquisitions by large software companies such as Microsoft, Blackboard, and alliances with other software and even publishing companies. The competition for high quality talent in the development of complex software systems that can integrate changing content with flexibility across organizational boundaries will be intense. Finally, as you will note in the next section on success factors, the successful organization in this market will need to be skilled at a wide range of changing skills and competitive capabilities. Just as important is the increasing expectations of customers (large or small organizations, public or private organizations, as well as individuals) using eLearning solutions. Adding to the demands on competitors within the LCMS market will be the availability of alternative forms of learning to include on campus/extended campus offerings of major universities, and of course learning through what is now considered traditional CD content offerings.

KEY COMPETITIVE CAPABILITIES IN THE eLEARNING LCMS SEGMENT

Success in the eLearning market will require many small firms to acquire the necessary capital for growth. In order for an LCMS provider to generate the required capital, they will need to show they have the capabilities to respond to an increasingly sophisticated customer (large organizations with specific and broad knowledge solution requirements) base. The successful LCMS provider must consistently meet the demand for ever increasing functionality and the usage requirements of a daunting variety of learning environments. Without question, the LCMS must securely protect the company's proprietary learning assets, must be able to meet the expanding needs of the customer, and must perform flawlessly in a customer's environment.

The successful LCMS provider is characterized by those that can best provide a "one stop shop" for their customer's educational needs. The LCMS provider must have a rich background in eLearning, industrial design, and learning strategy consulting. Successful providers must offer (or partner to offer) learning systems, consulting services, content development and repurposing, and deployment and integration facilities. This expertise flows throughout the company's approach to the market. Products must be competitively priced through a variety of pricing models. Both subscription and product licensing models are in common use. The subscription model allows customers access to the eLearning software and content for a specified period of time; after that time expires access is denied. With the licensing model the software/content is purchased (i.e. you can purchase a license for Microsoft Office 2003); when updated releases become available licenses must be repurchased typically at a reduced rate.

Beyond pricing, the provider needs to demonstrate a strong Return on Investment for their products. Product rollout timeframes have shortened considerably. For most customers it is no longer acceptable to require one or three year product rollout plans; instead the LCMS should be fully configured, installed, and operational in 6 to 12 months. LCMS providers whose products can be rapidly deployed significantly reduce the risk of lengthy, complex implementations and have a significant competitive advantage in the market.

The LCMS provider must ensure that their systems can be easily integrated with their customers existing computing environment. This integration is demonstrated in a number of different ways:

- The LCMS must comply with the existing standards in order for the LCMS to be easily integrated with the company's existing Human Resource and/or ERP systems. These standards also ensure the company has the widest range of choices for procuring or developing their learning content.
- Legacy or existing learning content must be easily importable into the LCMS. Many companies already have enormous investments in learning content; this investment must be fully and easily leveraged within the LCMS.
- The LCMS must be able to track learner activity, communicate that activity to external systems, and suggest to the learner relevant learning sequences. The LCMS should be able to track and communicate the CE hours and certifications obtained by the learners to external systems.

The LCMS must be adaptable to the company's needs. The LCMS' user interface ("look and feel") should be easily customizable to match the company's other systems. The LCMS' use of terminology and language must be easily customizable to the particular industry and company procuring the LCMS. The LCMS system that provides flexibility for end users, allowing them to structure the system according to their unique learning approach could be invaluable.

The LCMS must provide a robust set of tools and training on those tools that will allow the company's content developers to easily maintain and create the company's proprietary learning materials. Since the LCMS facilitates the strategic function of learning within a company, the LCMS provider must ensure consistent, timely and professional support for their customers.

INSTRUCTORS CASE TEACHING NOTE eLEARNING INDUSTRY - 2001

Overview: This case highlights the structural attributes of the eLearning Industry. The case presents interesting details regarding the evolution of the eLearning market and provides the opportunity for students of strategic management to build critical industry analytical skills by applying a variety of techniques. The analytical techniques applied include the identification of the chief economic characteristics of the industry, Porter's five force model of competition, the impact of driving forces on industry structure, and the identification of necessary competitive capabilities (success factors) for success in the eLearning industry.

Suggestions for Using the Case: Students should find Competition in the eLearning Industry to be an interesting case because many of them are utilizing platforms provided by eLearning companies. For students in programs (such as business) that place a heavy use on computer (technology) applications the case should have important relevance. We recommend instructors use the case after having covered material typical to the analysis of an Industry or Market in order to determine the overall competition in the market, its profit potential, and overall attractiveness. The case is ideal for demonstrating the use of Porter's five force model and the impact on overall industry attractiveness. Additionally, driving force analysis for this industry is important as it demonstrates that the dynamics of competition in the industry are in the midst of dramatic change. The case highlights the stages that have evolved through product development and points out the type of changes to anticipate in the near future. There is also ample information in the case for students to go beyond five force analysis and determine several dominant chief economic characteristics and evaluate industry key success factors (capabilities).

Assignment Questions:

1. What are the dominant business and economic characteristics of the e-learning environment?
2. What is the competition like in the online banking industry? Which of the 5 competitive forces is the strongest? Which is the weakest? What is your assessment of the long run profitability of this market based on your competitive analysis?
3. What are the major drivers of change in this market and what impact will they have on the level of competition and profit potential for the overall market?
4. What key capabilities/factors determine success in the e-learning industry?

5. How attractive is the e-learning market? What type of investor would be most likely to be interested in this market?

Teaching Outline and Analysis

1. What are the dominant business and economic characteristics of the e-learning environment?

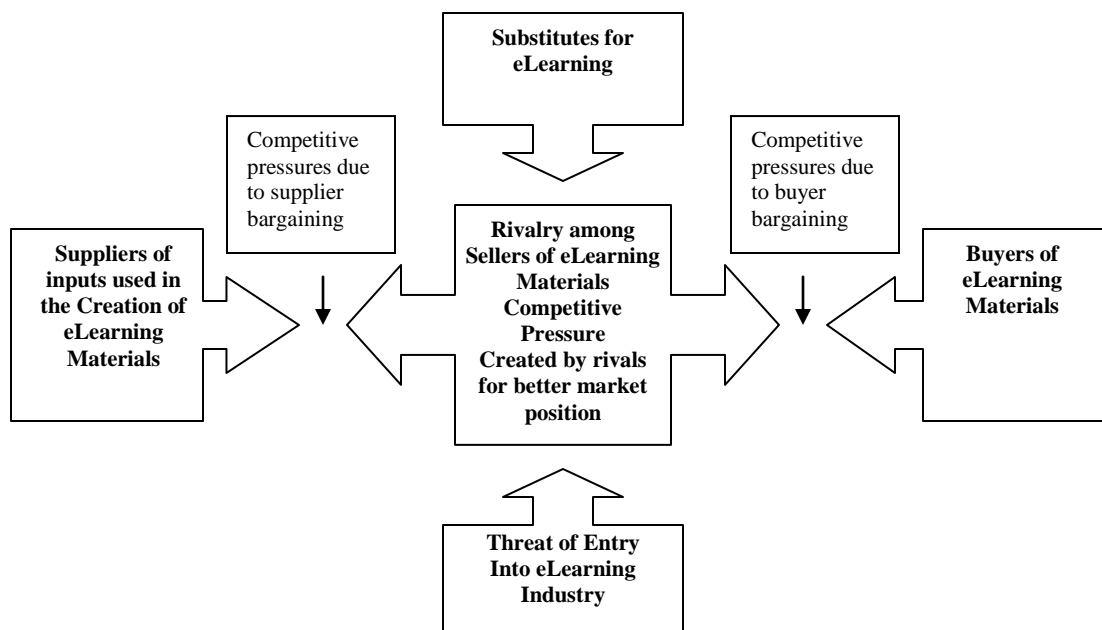
Students should be able to identify the following business and economic characteristics of the eLearning Industry.

- **Market Size.** While the world wide market for training and education is very large (772 billion) the size of the U.S. corporate market is estimated to be 4 billion (Hambrecht) and 3.5 billion by Screen Digest. While students may find this “difference” to be somewhat disconcerting, the estimates are in the same range. Most importantly, the U.S. market is targeted to grow to 11.4 billion by 2003 and 50 billion by 2010. Table 1 also reveals a breakout of the size for different parts of the market but what is most important here is the fact an eLearning provider would need to be involved in all three segments to be competitive.
- **Market Growth Rate.** Table 1 provides the CAGR from 1997 to 2003 for each segment as well as for the overall market or 83.4%. Students should also calculate the CAGR from 2003 to 2010 if the market grows from 11.4 billion to 50 billion. Over these 8 years or 7 periods the CAGR would be 23.5%. This reflects a significant decrease compared to the past 7 years, but to be expected as the base increases. None the less, competitors should anticipate a growth rate slowdown in terms of dollar volume.
- **Number of Competitors.** There appear to be several small competitors poised to take advantage of an increasing demand for eLearning solutions in both the corporate and educational markets. There also appear to be a couple of large players (Microsoft and IBM) that have begun recent initiatives to have a presence in the evolving LCMS market. This suggests there will likely be some clear “winners” and “losers” in the more competitive LCMS market, especially among the smaller competitors. At this point in the industry it is too early to identify who those competitors may be.
- **Stage of Market.** The market has already gone through several “stages of evolution” as reflected in Table 2. Product sophistication has clearly increased, and organizations competing in the LCMS market will be confronted with stronger demands for integration, functionality, customization, at lower costs. This suggests the market is moving from the early development of the “growth” stage to later development in the “growth” stage.
- **Type of Market:** According to some author’s, this market would be “typified” as a high velocity market characterized by shorter product life cycles, strong elements of product innovation and technological change, along with increasingly higher expectations from buyers of eLearning platforms. Given the relatively high number of smaller competitors, some students may also see the market as still fragmented.
- **Type of Product (Standard or Differentiated).** The products provided in the LCMS domain clearly need to be customized to likely buyers. As stated in the case, competitors will need to provide a variety of eLearning solutions. Competitors should be able to distinguish themselves by providing all of the building blocks for an Enterprise LCMS platform which was provided in Table 3. Accordingly, there will be multiple opportunities for competitors to differentiate themselves.
- **Scale Economies.** Currently, no single competitor or group of competitors enjoys the advantage of large scale.
- **Degree of Vertical Integration.** To the extent that developers of proprietary LCMS platforms also are engaged in the sale and subsequent service of the product, some students may argue that there is partial integration within the industry supply chain. In fact, many of these smaller providers are challenged to provide both the servicing of their product, sale and distribution of the product, as well as the implementation of the product platform.
- **Experience Curve/Learning Curve.** The capabilities necessary to provide comprehensive LCMS solutions are based on a large investment in Human Capital. The case provides the key building blocks for a LCMS platform in Table 3. All of these requirements suggest strong experience/learning curve effects.

- **Entry Barriers:** To develop a platform that would provide a comprehensive learning solution an organization would need the depth in domain knowledge to develop comprehensive solutions. These skills would be based on recruiting and developing highly skilled IT professionals. As Bill Gates has repeatedly argued on the potential for a pool of talented individuals to develop a new operating system, the possibility keeps an organization like Microsoft humble and consistently innovative. To the extent that the same argument applies to the LCMS segment, we would argue that the barriers are relatively low. However, generating the necessary financial capital that allows small firms to develop the staying power in this market appears to be significant at this point. Accordingly, entry barriers would appear to be moderate based on learning and experience curve effects, as well as the need for continuing infusions of capital.
- **Profitability:** Most organizations in the LCMS segment have not achieved an attractive level of profitability. In fact, they are experiencing negative cash flows with a strong dependence on venture capital in order to survive.

Conclusion: Based on the chief economic characteristics of this market, the market would appear to be moderately attractive (at best) to both an outsider looking to get into the market as well as those who already have a presence. The attractive characteristics from the outside include, moderate barriers, growth and profit potential, relatively small competitors, and the opportunity to take advantage of a differentiable product. Factors that would appear to be positive for those already in the market include the development of depth in knowledge based on experience that could serve to be a source of an advantage that provides strong growth and profit potential. There are no large competitors or market leader among current industry participants. As the market matures with the expected consolidation and emergence of market leaders, those that survive would be expected to achieve attractive growth along with profitability.

2. **What is the competition like in the eLearning industry? Which of the 5 competitive forces are the strongest? Which is the weakest? What is your assessment of the long run profitability of this market based on your competitive analysis?**



- **The bargaining power and leverage of buyers** – A moderately strong competitive force.
Typical buyers will be very careful in selecting an LCMS provider due to the strategic importance of such a decision as well as the impact on the organization's infrastructure. When the buyer is a large and major global competitor they will need to include a wide variety of internal constituents in the buy decision. This puts a heavy burden on the LCMS provider. An additional factor that suggests buyer power is moderately strong would be the relatively small size of current LCMS providers. Additionally, it should be mentioned that given the importance of the choice of a LCMS provider this choice should be viewed as a highly collaborative process which tends to reduce the bargaining power of a buyer in favor of a more interdependent relationship.
- **The bargaining power and leverage of suppliers** – A weak competitive force.
Suppliers to eLearning providers include talented individuals with programming and system development skills. To the extent that these individuals are difficult to find, it provides these individuals with stronger bargaining power. Other inputs would include the hardware, technology (servers, routers, computers,) necessary to develop LCMS platforms. Most of these inputs can be easily obtained by rivals.
- **Substitutes for eLearning** – A moderately weak competitive force.
The most prevalent substitutes will come from the availability of alternative forms of learning which would include on campus/extended campus offerings of major universities, and learning through what is now considered traditional CD content offerings. However, the extent these alternative forms would be considered a serious threat to the LCMS provider in our opinion is not formidable. Given the integrative requirements and strategic importance of this product to buyers, we believe they would not seriously turn to these substitutes for their comprehensive eLearning solutions.
- **Rivalry among competing eLearning providers** – A moderately strong competitive force that is likely to intensify.
Students should conclude that with relatively low barriers, especially for someone like Microsoft, along with the fact that currently the competitors are of relatively small and equal size, competition will be strong. While there are opportunities to differentiate, in a high velocity market advantage can erode quickly. There will be strong competition to get ahead of other rivals by offering high quality comprehensive solutions that if adopted by a few prestigious buyers can lead to distinctive advantage. There will be strong competition for high quality talent and buyers will be exceptionally selective in the process of making a choice among providers.
- **Barriers to Entry** - A moderately strong force
The need to acquire the necessary intellectual and financial capital presents formidable barriers for organizations attempting to enter the industry. However, there are several large firms that have an interest in this market (Microsoft) and have developed relationships with current competitors which could make their entry more likely.

Conclusion: The strongest competitive force is clearly rivalry with low barriers and relatively strong buyer power contributing to a market where competition is moderately strong and will intensify. This should put downward pressure on the profit potential for competitors within the eLearning market. The weakest forces are substitutes and supplier power.

3. **What are the major drivers of change in this market and what impact will they have on the level of competition and profit potential for the overall market?**

- **Growth rate and Globalization of the Market** – While the growth is still increasing but at a decreasing rate, this would generally be seen as positive, especially since the projected CAGR is 23.5% through 2010. Globalization of a market can be mixed because it brings in new competitors as well as exposes organizations expanding their geographic scope to more risk (economic, political, and cultural). However, it also obviously opens up opportunities for new growth. The tradeoff's here usually tend to be firm specific and have an important short run-long run dimension. Accordingly, we would conclude that in the short run, the opportunity for established competitors to attract global companies would be a positive due to an expanded market (which decreases competition in the short run and increases profit potential).

- **Corporate (Customer) needs to manage Knowledge in a “cost” efficient manner** – The need for most organizations to not only develop but transfer competitive relevant knowledge is clearly increasing. This suggests increases in the demand for comprehensive LCMS solutions. The impact on industry competition should therefore be moderated and improve the potential for profits.
- **Technology as both an Enabler and Driver** – The capabilities of hardware, and the technical infrastructure to support it move ahead rapidly and often lead to development in other areas. For example, technologies such as wireless access to high bandwidth and web-enabled mobile phones are released to a market and initially adopted by enthusiasts. Businesses then experiment with viable models for the efficient use of the technologies and methods for integrating them in organizational practices and culture. As end users become accustomed to the technology benefits are more readily recognized and the technology becomes integrated into processes. This recurring cycle results in technology being both an enabler and driver for LCMS solutions and has both negative and positive impacts on competitors. For those that can take advantage of correctly identifying where first mover effects can be capitalized, the effect will be positive. For laggards, the effects may well be disastrous. The important issue here though, is to identify what the overall impact of technological innovation will have on the market as a whole. Generally, the faster innovation is transferred across national boundaries the more industries become globally competitive. This rate increases as organizations use acquisitions, mergers, and joint ventures to either complement their capabilities or respond to market forces. In any event, we tend to fall on the side increased rates of innovation tend to increase competition between competitors and make profits more difficult to acquire for the industry as a whole.

Conclusion: The identified drivers for the eLearning market and their overall effect on competition will tend to push rivals across a broader domain, with increasing technological innovation, and expanding organizational expectations. While the demand for managing both explicit and implicit knowledge will increase, this demand will place extraordinary pressure on survivors in the LCMS segment. We accordingly suggest that based on the impacts identified above for each driving force, the overall impact will be to suggest increasing competition between survivors along with downward pressures on profit.

4. What key capabilities/factors determine success in the e-learning industry?

- **Ability to acquire needed Capital** – This is the core factor determining success in the market. Many of the competitors tend to be under capitalized and tend to operate in a negative cash flow status. The other factors listed below determine the ability of the competitors to obtain the necessary capital from the financial markets.
- **Capability to provide flexible and robust product offering to meet the challenges of diverse learning environments** — The market is highly fragmented with a daunting array of learning needs and environments. To gain traction products targeted at such a market must be easily customizable both in functionality, user interface, and learning environmental support.
- **Ability to provide a “One Stop Shop” for customer’s learning needs** – There are many aspects to providing a successful learning solution to customers: learning support systems, content development and repurposing, learning consulting, and application integration and rollout services to name a few. Most customers would prefer to choose a single source provider that can offer complete solutions. In turn this factor drives the industry toward consolidation and partnerships. Larger, more mature firms are better able to accommodate this multifaceted business model.
- **Ability to demonstrate strong ROI of product offerings with aggressive timeframes** – The appetite of customers to risk high speculative, expensive, long term technology expenditure has significantly eroded from the peak on the “.com” bubble. To be successful the returns of investment must be predictable, rapid, and quantifiable. As the market continues to tighten, long, open-ended product adoptions are difficult to sell.
- **Ability to provide tightly integrated solutions to customer’s legacy systems** – The learning systems must work flawlessly with a wide array of corporate legacy systems and learning content. A key driver of this integration is the wide spread adoption of learning standards throughout the industry. Systems and

content that comply with these standards are easier to interface, less costly to maintain and grow and are more likely to survive for the long term.

- **Customer Support** – As with many early stage industries, customer support in eLearning has historically been unreliable. As the market matures and the size and sophistication of the customer base increases, continuing customer support becomes a key differentiator between the competitors. Many of the customers view their corporate university as profit centers; a high level of customer support is essential to securing those centers.

Conclusion: This market poses substantial challenges for an organization to be successful. The success factors are many and due to frequent and large changes require speed, and flexibility in product offerings along with strong customer service. Finally, to survive the current lack of profitability for existing firms, it is necessary they develop strong relationships with venture capitalists.

5. How attractive is the elearning market?

The market is clearly maturing at a rapid pace. The product offerings have shifted from the custom built, “one type” solutions towards flexible, productized systems that are easier to install and maintain. This is a key factor in allowing the competitors to easily scale the growth of their business. Also, with the increasing adoption of eLearning standards the cross-vendor interoperability of learning content and software systems is also improving rapidly.

The market has shown a history of unpredictability and high volatility. Due to the negative cash flow posture that many of the competitors maintain, those competitors are often in a precarious, financial position. Failure rates within the market are high. There is already considerable consolidation amongst the competitors through mergers and acquisitions; the pace of this consolidation is likely to increase as larger, mature firms enter the market.

To the outside, individual investor the eLearning market can be a difficult one to track and analyze. eLearning would be attractive to those institutional investors interested in high risk-high return investments. Many of those investors are boutique venture capital firms; others are larger companies looking to have a presence in the eLearning space or those interested in eLearning to support their other strategic initiatives.

Conclusion: While this market is rapidly maturing and becoming more stable, eLearning would still be viewed as a high risk/high return sector that would primarily be attractive to the institutional investor that has the inclination to monitor a highly volatile market. The market is appealing due to most recent growth, but the projected growth is expected to decline. While the product is one that can be differentiated, the extent to which differentiation will lead to a sustainable advantage is suspect. There are several large firms that may be interested in entering this market and bring with them a strong presence in related markets that could have a major negative impact on overall competitive conditions. The analysis of chief economic characteristics suggests the market is currently moderately attractive. Our five force analysis suggests moderately strong levels of competition that will exert downward pressure on profit potential. The same conclusion was reached after our analysis of the impact from key driving forces. Finally, the success factors facing competitors represent a formidable set of necessary capabilities. This market will be unattractive to most organizations attempting to enter the market without any strong history with high velocity markets and access to substantial amounts of venture capital. For existing competitors, the next several years will be critical as we would expect market leaders to emerge with the rate of selection or nonretention to increase.

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