

Book "Rethinking Management Education"

E-Learning Business Models Strategies, Success Factors and Best Practice Examples

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1 Introduction

As the Internet changes almost every sector, it influences management education worldwide as well. Due to the interactivity and ubiquity of the Internet, learning is possible without space and time barriers. The globalization of education is increasing rapidly: Students are able to attend courses from all over the world (e. g. at the Open University in Great Britain, online courses at reputable Business Schools, new E-Learning websites and portals), have access to teaching material worldwide (e. g. MIT), employees work and study globally in multinational companies. The students and instructors are connected through a digital medium, which replaces the physical, geographically delimited meeting space. Education around the world is becoming strongly networked, and we are beginning to see fundamental changes taking place in the organization of education. We no longer have geographical isolation at the college and university level. The long-term implications are a worldwide network and a real marketplace for university and college level education. This will expand naturally into vocational and adult training as well. Education will become a major export factor between countries. The competition between universities is more and more increasing and the universities are under the pressure to find "new strategies and business models" to produce and deliver educational products.

Similarly, company training is influenced by the dramatic changes as well. Multinational companies already train their employees via online learning networks globally. E-Learning as a new buzzword for web-based education and web education support services (e.g., business strategies, technologies, applications, etc.) seems to be a growing market. Companies are spending more than ever on training to respond to a growing need for new information and knowledge required to cope, manage, and drive new challenges. The business environment is going through a dramatic transformation due to the increased interdependencies, complexity, and uncertainty of the radical changes in information technology and emerging technologies, globalization, shifting industry boundaries, changing customer demands, increased expectations for social responsibility, rapid shifts in business practices, and other changes that are placing new stresses on the organization and its people and changing their requirements for success (Glutz, 1999, 10). These ever-changing new technologies require more and quicker means of teaching and training employees.

Beyond doubt: E-Learning has created a hype for companies, universities and other educational institutions. It has led to the phenomenal growth in the use of web-based learning and experimentation with multimedia, video conferencing, and internet-based

technologies. According to several forecasts, given by Gartner Group or International Data Corporation for example (International Data Corporation, 2000), E-Learning seems to be a promising and tremendously growing market. Conversely, announcements of failures and closing E-Learning providers such as Governors University or Pensare, show how instable and dynamic this new market is. The true fulfillment of the promising forecasts is questionable. However, due to the limited capacity of physical locations, and time and place constraints of students E-Learning offers innumerable advantages ranging from technology issues, didactics to the convenience for students and faculty (Porter, 1997, 12). A new learning paradigm based on students' self-organization and collaborative approaches appears to be essential to cope with the challenges of an learning organization.

New E-Learning strategies are needed to implement the new learning paradigm and to react to the changes in a competitive and global education market. This will reshape the role of training and education in the organization and create enduring advantages for firms, universities and educational institutions. The purpose of this chapter is (a) to introduce the changes in the education market and to explain E-Learning as the convergence of several forces, (b) to outline a framework for E-Learning business models for the implementation of the changes, (c) to demonstrate best practice examples for the different E-Learning business models, and (d) to analyze some trends and critical success factors for achieving a leading position in the E-Learning market. The last section (e) briefly summarizes this article and concludes with main implications for management institutions as well as for management educators.

2 E- Learning and the Changing Education Market

E-Learning is a very broad term for internet-based learning in general. Distance education, online learning, E-Learning – all of these terms are becoming synonymous with the latest approach to providing high quality educational offerings. E-Learning can be defined as technology-supported learning and the delivery of content via all electronic media. Compared to computer-based training (CBT) E-Learning places greater emphasis on interaction and communication. Interaction with the instructor and with other students may occur via internet-channels, videoconferencing or teleconferencing, in asynchronous (email or bulletin board) sessions or synchronous (e. g., chat room, whiteboard, application sharing) sessions (Seufert et. al., 2001, 35).

Furthermore, the term „E-Learning“ has created a hype over the last couple of years and implies commercialization aspects. E-Learning as one of those fashionable „E-words“ has been established as a new "buzzword" which is mainly created and pushed by marketing strategists and by educational institutions to boost the E-Learning trend. The Internet has allowed colleges, corporate universities and for-profit businesses to begin offering degrees and executive education via the Web. Definitions or articles about E-Learning are not older than 2 years, meaning that we are speaking about an term that exists merely since 1999. That was the time when companies offering computer based training established so-called E-Learning solutions. One of the largest companies in this business field, „CBT systems“ renamed itself „Smartforce“ in 1999, introducing the trademark „The E-Learning Company“. Today, this company has a market leader position in delivering

integrated E-Learning solutions (Urdan and Weggen, 2000, 52). This example represents the general development of the last two years.

According to several forecasts this segment of the education market appears to be the fastest growing when compared to the traditional market. International Data Corporation estimates that the online corporate education market may total \$11.4 billion by 2003, up from \$234 million in 2000 (International Data Corporation, 2000). John Chambers, president and CEO of Cisco Systems promotes E-Learning on its corporate website: "There are two fundamental equalizers in life: the Internet and education. E-Learning eliminates the barriers of time and distance creating universal, learning-on-demand opportunities for people, companies and countries" (quoted from the website: www.cisco.com). He emphasized at a key note speech to the Fall 1999 Comdex Trade Show in Las Vegas that "the biggest growth in the Internet, and the area that will prove to be one of the biggest agents of change, will be in E-Learning" (Rosenberg, 2000, Preface xv). Is it just a pushy marketing strategy or is there truly a global market that is potentially worth hundreds of billions of dollars? Why do all forecasts agree on the dramatic growth of E-Learning?

A reasonable answer has to consider diversified and multiple factors. Technology drivers, pedagogical advances and changing learning patterns, the demands of corporate training and the business aspect of E-Learning as "window of opportunities" are determining factors. Therefore, E-Learning represents the convergence of many factors from different fields, for example technological drivers, changes in society, edutainment drivers, changing corporate training and the new learning paradigm which describes the shift from training to learning (Meister, 1997, 22). The new learning paradigm emphasizes the following critical issues:

- self-organized learning, focus on metacognitive learning strategies and preparing life-long learning skills,
- emphasize on process-oriented learning (to focus on „learning to learn“) instead of product oriented learning,
- shift from training to self-responsible learning,
- student- and team-oriented methods and collaborative learning based on constructive learning theories, building a community of learners, experts, facilitators, coaches,
- high flexibility, personalized and individualized learning (according to different learning types, personal preferences).

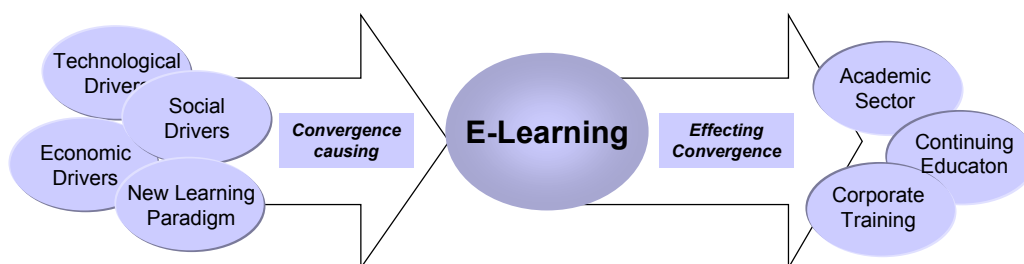


Fig. 1: E-Learning Convergence

E-Learning represents the convergence of several factors. Conversely, the growth of E-Learning and distance education have converging effects on the educational market (see fig. 1). The once almost visible line between the academic and corporate sector is disappearing. Companies and Universities become both customers and suppliers of the new E-Learning business models.

3 Business Models for E-Learning Strategies

3.1 Introduction

What are the challenges and strategies for universities and for companies? Who are the competitors in a converging education market? Who are the key players of E-Learning? What are the new business models in this converging market?

First of all, what challenges do emerging business models face in delivering E-Learning strategies?. The literature about electronic commerce is not consistent in the usage of the term "business model". Timmers (2000, 3) gives the following definition what is meant by a business model:

- an architecture for the product, service and information flows, including a description of the various business actors and their roles, and
- a description of the potential benefits for the various business actors, and
- a description of the sources of revenues.

Based on these definitions the different business models of the E-Learning market will be introduced in the following section.

3.2 Framework of E-Learning Business Models and Best Practice Examples

The education market landscape has developed several models to produce and deliver educational products (Brockhaus et. al., 2000, 140). Some have their roots in the academic sector, some in the business sector. But as noted in the previous section, the line between both academic education and corporate training sectors is blurring (demonstrated in the following figure). Among innovative E-Learning business models, one may distinguish between "the alma mater multimedialis", which describes a "traditional university" in the transformation process focusing on implementing the new learning paradigm, and several models offering new ways of delivering education, which include "Virtual Universities", "University Networks", "Corporate Universities", "Education Providers" and "Education Consortiums".

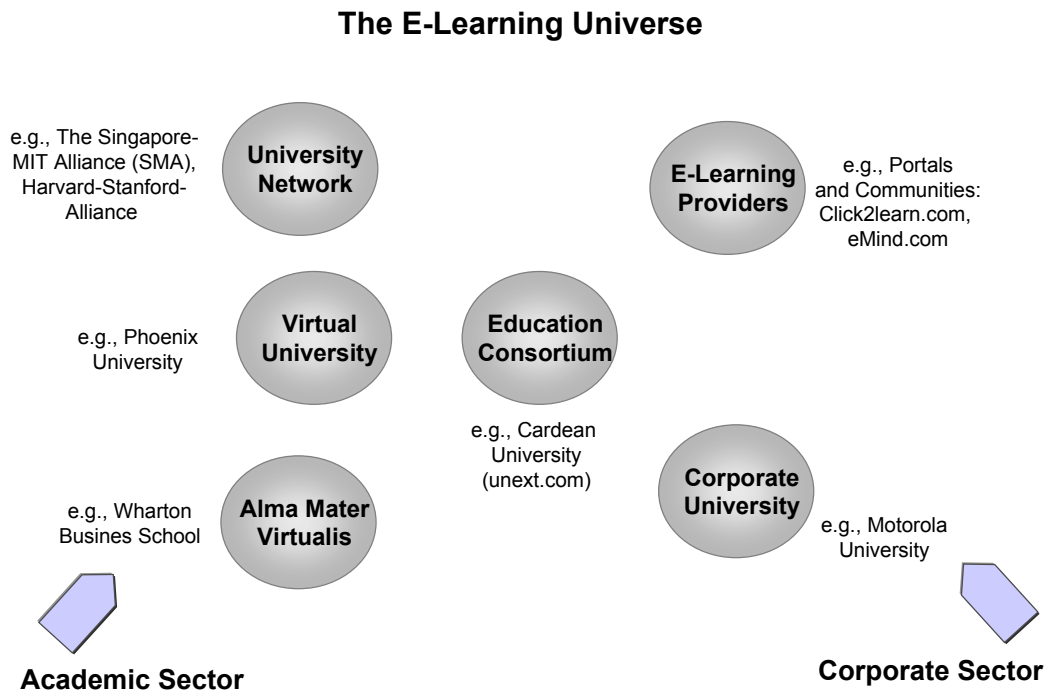


Fig. 2: Landscape of E-Learning

New entrant E-Learning players have developed mostly by deconstructing the traditional educational value chain. With reference to the e-commerce terminology one may distinguish between three different business fields:

- E2B = Education to Business (corporate E-Learning),
- E2E = Education to Education, University, Professors, other educational institutions (university E-Learning),
- E2C = Education to Consumers (E-Learning focusing on the private sector).

3.2.1 Alma Mater Virtualis / Multimedialis

"Traditional" universities, the "classic alma mater", will probably exist in two different forms in the future. First, only a few elite institutions, recognized as centers of excellence, will offer their specialized expertise to a global market. Education as customized learning will be provided by the best "masters" in a field. Second, the alma mater will survive by offering a lower education quality but will be confronted with global competition from the academic and corporate sectors. The traditional university can evolve to a kind of "alma mater virtualis/ multimedialis" by creating a learning and community platform for their students and developing a library of online courses. Hybrid-concepts will be used for teaching in the form of method mix and a combination of face-to-face seminars and self-conducted online-course components ("dual mode institutions"). The benefit for the university will be in a better study (information, communication and cooperation) infrastructure and the improved personal contact between the students and their professors and tutors.

The business actors will be mainly universities and private students, which means the "alma mater virtualis/ multimedialis" represents a typical form of E2C Business. E2B Business plays mostly a role in the field of executive education. The elite institutions in

particular will offer and deliver executive education modules to companies and to other universities (E2E-Business), e.g. as "USP" for their MBA programs. The sources of revenue are mainly universities fees and fees for courses and E-Learning products.

The main motivation of media-enabled teaching is different for virtual universities. As the next figure demonstrates, the degree of virtuality differentiates between traditional universities using media and Internet technologies to improve the quality of teaching, to organize self-study components, and to integrate innovative teaching concepts and those virtual universities using off-campus teaching as the dominant course delivery mode.

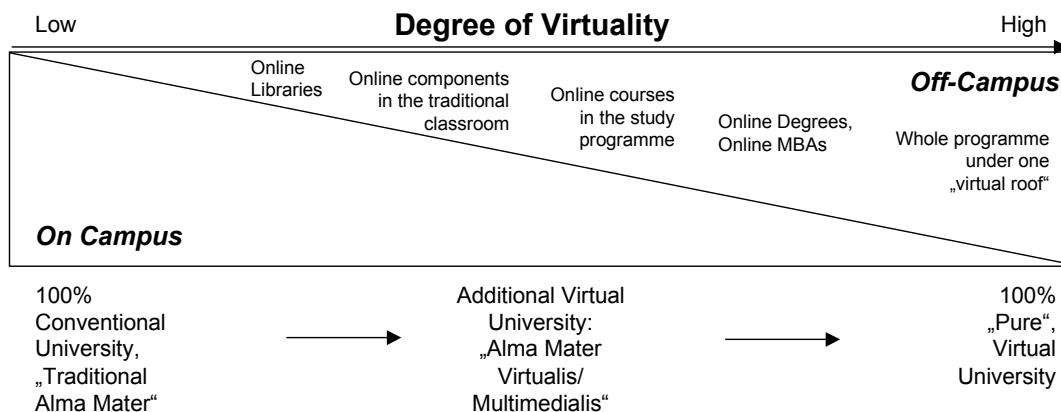


Fig. 3:

Furthermore, the options for universities to act on the E-Learning market depends on their cooperation strategies, shown as degree of cooperation in the next figure. Implementing key partnerships and building networks with corporate partners should be seen as key success factors to secure a strong position in the E-Learning market.

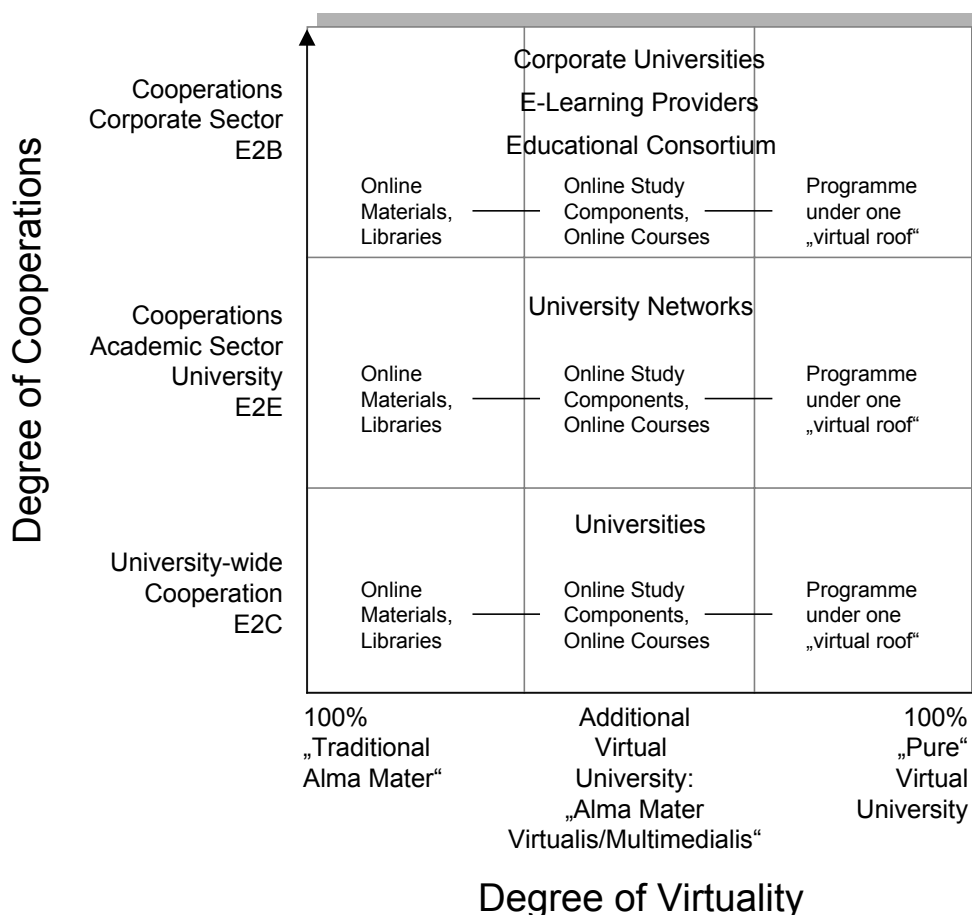


Fig. 4: Degree of Virtuality and of Cooperations of Universities

According to figure 4, three models are suggested as a framework for "traditional universities" to use to develop online courses and to act on the E-Learning education market:

- *University-wide Approach*
This cooperation model focus internally on the organization itself whether an University follows a broad E-Learning strategy for undergraduate and graduate degrees. It includes the classic tuition reimbursement model where students have to pay for attending (virtual or traditional classroom) courses. The benefit for the university in this model is that universities can entrance new markets and enhance potential customer segments because non-regional students are provided access from a distance via the Internet. Also, universities where the production of online material and courses is organized efficiently in centralized departments and learning centers can benefit from economies of scale effects.
- *Cooperations Academic Sector:*
Traditional universities have the option to cooperate with other universities in developing course material and E-Learning products. The benefits from this approach are sharing costs and reaching a critical mass of students for a specialized study programme. This approach leads to the business model "University Networks" which will be explained in 3.2.3.
- *Cooperations Cooperate Sector:*

Universities have the option to cooperate with corporate universities, educational providers as well as educational consortiums. Universities may offer their content and courses to corporate universities (see 3.2.4). Oftentimes, a commercial education provider or broker (the third party) hosts the website and works with a number of universities to offer course work. The third party supplier benefits by being able to leverage their "off the shelf" courseware and technology to a number of corporate clients. Educational institutions are crafting their own curricula and using companies like Ecollege.com as the portal provider. The business model of educational providers will be explained in section 3.2.5. The university itself has the option to spin off business ventures to pursue the market, as in the example of the Duke Corporate Education spin-off from Duke University illustrates. In section 3.2.6 the E-Learning business model of educational consortiums is assessed for integrating partners from the academic and corporate sector.

One best practice example of the type "alma mater multimedialis" is Wharton Business School of the University of Pennsylvania in Philadelphia (www.wharton.upenn.edu). Wharton is one of the leading business schools world-wide and initiated several Internet-projects to strengthen its leading position and to become the leader in technology for academic research. Wharton IS manager Kendall Whitehouse built the desktop environment and intranet-based information service "Spike" for students (Aragon, 1997, 29). Spike isn't an acronym, and the name doesn't have any kind of hidden meaning. Students can download course materials and class notes, gain access to the university library and its electronic resources, bid for a seat in a Wharton course, send email; chat in Spike's webcafe and explore the Internet and other areas on Wharton's intranet.. Furthermore, Wharton developed the huge research database "knowledge@wharton" and the internet-based business data service "Wharton Research Data Services (WRDS)".

3.2.2 Virtual Universities

The term "virtual university" is often not clearly defined and is used to refer to both "conventional" campus-based universities offering online courses ("hybrid" institutions, "brick-and-mortar") and virtual universities in a "pure" form in the sense that all their activities are delivered online via the Internet. A virtual university may be defined as an institution which is involved as a direct provider of learning opportunities and uses the internet to deliver its programs and courses while receiving tuition support (Ryan et. al. 2000, 2). Virtual universities belong to the academic sector, are often accredited and their core activities are the same as those of conventional universities. The business actors are the universities and their students, privately employed people, who are mainly studying part-time (E2C business). The benefit for the universities is that they can unite the whole program of a conventional universities under one "virtual roof". Students benefit from virtual universities because they can learn anytime and anywhere in a very flexible way to guarantee their continuing professional education. E-Learning environments guarantee access to digital libraries and to student teams and tutors to support their learning processes. Sources of revenues are similar to traditional universities and are mainly universities fees and tuition fees for online courses

Four models are suggested as a framework for "virtual universities" to use to act on the E-Learning education market:

- *Model 1: „Pure Virtual University“*

The virtual university exists instead of a traditional campus-based university. This is the model of a "pure virtual university. All core activities are delivered online.

- *Model 2: " Additional Virtual University"*
The traditional university has in addition a virtual university as well. This model is very similar to the „alma mater multimedialis model“. The e-learning strategy is organized university-wide and the programme complementary to the conventional university.
- *Model 3: Cooperations Academic Sector:*
Several traditional campus-based universities are the founding partners of an additional virtual university. This model is a special type of an university network which will be explained in 3.2.5.
- *Model 4: Cooperations Corporate Sector:*
In this scenario the university cooperates with partners of the corporate sectors, e.g. with educational providers or as a member of a consortium which will be analyzed in the following sections.

A best practice example of model 1 is Phoenix University (online.uophx.edu). Despite of the fact that this university has a small campus with learning centers, the online components are the main part of each study programme ("click-and-mortar-strategy"). The University of Phoenix Online was formed in 1989 as for-profit organization and belongs to the Apollo Group. The target group of Phoenix online are working adults pursuing continuing education, mainly in the subject fields of business administration and information technology. It currently enrolls more than over 15 000 online students. They work in small groups of 3 to 4 students who correct each others' weekly home works before they are given to the instructors. Each class shares its own group mailbox on the basis of Microsoft outlook express, which serves as an "electronic classroom." While communication between individuals is common, each class uses a group forum where students put their work and ideas before classmates for comment. This upgrades the quality of most work before its more formal, academic review by the instructor. Students can also access research material from the University's Electronic Library. The Online program is designed to benefit working adults: courses are offered one at a time, in sequence. There are no semesters, so students can begin a course of study any month of the year. A student can concentrate on one subject at a time, and can learn at his or her own speed. The key advantage for the students and working professionals is the flexible concept of anytime and anywhere learning in combination with a accredited certification programme.

3.2.3 University Networks

E-Learning affects networking among universities in a global market. For long-lasting competitive advantages universities form university networks. The members of the network have access to a pool of E-Learning products. Usually, the networks practice a hybrid-concept for teaching. Online learning environments are used in combination with face-to-face teaching. Courses and certificates are mostly compatible. The business actors are universities who offer their courses to other university members of the network (E2E business). The multimedia format of the products is usually not of the same high quality standard as institutions from the corporate sector (e.g. corporate universities).

Therefore the fees of the online courses as the main source of revenue are much more affordable for the partners. The university networks also serve the continuing professional education market, but they mainly offer their courses to small and medium enterprises (E2B business) which can't afford the development of online courses by themselves. At present, the main focus of existing university networks is the development of specialized study programs such as an MBA programme in electronic markets or media informatics. The benefits for the universities are sharing the development costs of online courses (economies of scale) and gaining a competitive advantage in a highly competitive market.

A few months ago, Harvard Business School and Stanford University founded a strategic alliance to strengthen their market position in the field of executive education. Another best practice example is the SMA University network (the Singapore MIT Alliance) (web.mit.edu/SMA). The Singapore-MIT Alliance (SMA) was founded in 1998 and is an engineering education and research collaboration among the National University of Singapore (NUS), Nanyang Technological University (NTU), and the Massachusetts Institute of Technology (MIT). A primary goal of SMA is the creation of a center of excellence for graduate education and research in engineering, which features the most technologically advanced distance learning facilities available. The center will provide opportunities for private-sector organizations to share in SMA's research, collaborate with its students, and recruit potential employees.

3.2.4 Corporate Universities

While corporate universities have been around for the last 40 years with the launch of General Electric's Corporate University in 1955, the real surge of interest in launching a corporate university as a strategic umbrella for managing an organization's employee learning and development began in the late 1980s (Meister, 1998, 2). The last ten years has seen the number of corporate universities grow from 400 to 1000.

Business actors can be considered companies and their training departments which they may have - depending on their type of corporate universities - internal (all employees, work groups, top management) and external target groups (suppliers, customers). The sources of revenue are dependent on the type of corporate university as well. The benefit for the companies is the flexible and fast concept of E-Learning. Conventional training is usually too procedural and fragmented to deal with the demands of fast knowledge turnover. Just-in-time learning and learning-on-demand are needs of corporate training. In the words of Douglas McKenna, General Manager, Executive and Management Development at Microsoft: "Learning is the most valuable benefit we can offer employees, and our ability as a company to learn faster and better than competitors is our most valuable competitive resource. The implications of this combination are quite staggering. When it comes to learning, what's good for employees is the same as what's good for the company" (Aubrey, 1999, 33).

In the E-Learning literature, many typologies of corporate universities already exist. Based on the common frameworks developed by Aubrey (1999), Deiser (1998) and Fresina (2000) five models are summarized below:

- *Model 1: Training Department, Qualification Center:*
 - Target group: all employees, internal focused,
 - Strategic goal: reinforce and perpetuate (evolution),

- Business Logic: incentives for professional education, certificates for the employees,
 - Curriculum focus: technology development, service development,
 - Knowledge aspect: general, fundamental knowledge and enterprise specific knowledge,
 - E-Learning aspect: learning anytime and anywhere, just-in-time, innovative learning methods.
- *Model 2: Top Management Lessons*
 - Target group: top management,
 - Strategic Goal: manage change (Revolution),
 - Business Logic: incentives for the top management, cooperations with Top Business Schools,
 - Curriculum focus: people development, customized executive seminars at top Business Schools,
 - Knowledge aspect: general and brand-new management know how,
 - E-Learning aspect: interactive discussion forums, f2f seminars, virtual cooperation partners and networks.
- *Model 3: Standardization Engine*
 - Target group: all employees, customers, suppliers,
 - Strategic goal: reinforce and perpetuate (evolution).
 - Business Logic: Economies of scale, costs are reducing the more people are involved in the corporate university,
 - Curriculum focus: technology development, service development,
 - Knowledge aspect: transfer of work practices,
 - E-Learning aspect: development of mass products, interactive learning systems for a broad target group, standardized programs.
- *Profit Center, Education Vendor*
 - Target group: all employees, customers, suppliers, other companies, consumers,
 - Strategic goal: reinforce and perpetuate (evolution).
 - Business Logic: profit, revenues (e. g. corporate fees, fees for online courses, etc.),
 - Curriculum focus: technology development, service development, enterprise specific knowledge
 - Knowledge aspect: transfer of knowledge, content delivery
 - E-Learning aspect: killer application on the internet, mix of educational products, interactive and innovative learning forms, learning anytime and anywhere, just-in-time, marketing of E-Learning products (e.g. education portals).
- *Learning Lab, Strategic Change Engine*
 - Target group: all employees, customers, suppliers,
 - Strategic goal: drive and shape (Vision),
 - Business Logic: sustained competitive advantage on the basis of a learning culture, strong relationship to knowledge management,
 - Curriculum focus: not extremely focused, technology, service, people development, certificates are not relevant,

- Knowledge aspect: creation of new knowledge, initiate innovations,
- E-Learning aspect: work-out programs as knowledge exchange and creation places, direct communication, interactive learning processes.

As a best practice example, Motorola University represents a combination of a qualification center and a learning lab (<http://mu.motorola.com>). Motorola University was established 1981 and designed as a "center for strategic thinking and a major catalyst for change" (Aubrey 1999, 37). Therefore, the effort required the strong commitment from the top. At present, 130 000 employees and a huge number of customers and suppliers in five continents are users of the Motorola University. Motorola manages what it considers a strategic competency of the company - a learning strategy which includes customer satisfaction, manufacturing supervision, negotiation and communication. Teaching methods range from face-to-face classroom training led by professional instructors to original coursework developed by line managers and to "learning on the job concepts" of shop-floor workers teaching their peers essential job skills. The media based environment builds the Internet, CD-ROMs (as just-in-time lectures technology) and the web-based training administration system (TAS). Despite the term "university", fundamental education is not the focus of Motorola University. One best practice example of the curriculum is Motorola's innovative leadership development program - China Accelerated Management Program (CAMP) where learning is always tied to a real business issue and includes case discussions and action-based exercises. Underlining the strategic importance of learning, Motorola University has its own board of trustees, which includes Christopher Galvin and the heads of the company's major business (Aubrey, 1999, 37).

3.2.5 Commercial Suppliers, Educational Providers

Commercial suppliers or educational providers represent E-Learning ventures mostly as new entrant E-Learning players by deconstructing the classic educational value chain as the following figure shows:

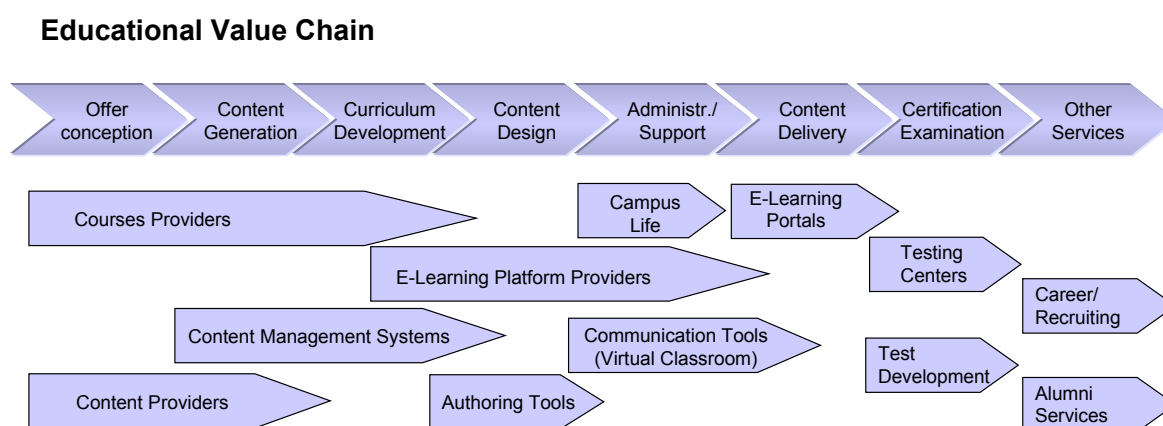


Fig. 2: New E-Learning Providers by deconstructing the Educational Value Chain

Financial capital to launch new ventures comes from the corporate sector. Companies are investing in the E-Learning market as it is a business field of dramatic growth. The business actors are the education providers, both companies and universities as suppliers or customers and private consumers. The whole portfolio of E-Learning is represented:

- *E2C Business*: The target groups are students and adults interested in supplemented learning. For example, GEN.com (Global education network) is a

content factory and service provider seeking to provide a strong core curriculum in liberal arts. The content is supplied by acclaimed professors but GEN provides the technology to video tape and disseminate courses.

- *E2E Business*: Customer are universities and university professors as the example of WebCT.com (www.webct.com) demonstrates. WebCT's main area of business is providing web packages that allow faculty to develop, deliver and administer web-based courses.
- *E2B Business*: E-Learning ventures provide corporations with interactive web-based training courses affiliated with universities (e.g. Quisic.com) or not affiliated with any universities (Emind.com).

Sources of revenue range from advertising, fees for courses, books, subscriptions to university fees and corporate fees. New entrant E-Learning players have developed by deconstructing the traditional educational value chain. Three basic internet-based education business models have emerged seeking to offer the benefits of the Internet::

- *Model 1: Integrator*
Similar to a virtual university or an online business school, the educational provider of this model develops and delivers every single process of the educational value chain, including offer conception, content development and delivery, and other customer services.
- *Model 2: Broker*
An education broker collaborates together with other partners along the educational value chain. In this model the value chain is deconstructed and the broker has the function of coordinating the different processes. This model represents a strong network of academic and corporate partners. Partners include corporate universities, traditional universities, other education providers who can be both customers and suppliers. This model is almost identical with the E-Learning model of an education consortium which will be explained in the next section.
- *Model 3: Specializer*:
Some E-Learning companies concentrate on a specific service within the educational value chain, e.g. authoring tool developers, E-Learning platform providers or testing centers.

As a best practice example, the E-Learning site Quisic (www.Quisic.com) demonstrates a corporate content provider. Quisic is a content factory that provides education products mainly to corporations. These products are typically unavailable to the individual student through university programs. University professors help to develop the content and Quisic offers to corporations tailored programs or pre-MBA programs. Quisic's strategy is to provide the best quality of on-line education. Quisic has won more than 50 awards for educational excellence. The site provides a full range of products from a library of books and articles to undergraduate, graduate and corporate courses. The sources of revenue are mainly universities, corporate fees and institutional funding. In the education market for four years, Quisic continues to grow as it recently purchasing IEC, a 17 year old custom corporate training development company. Quisic is also planning to deliver courses with E-ducavia through a \$ 96 Mio joint venture with Cisco, IBM and Telefonica.

The partners plan to create an online business school for Spanish, Portuguese and Latin American markets.

3.2.6 International Education Consortium

The international education consortium is a group of companies who come together to pool their training resources, offering their education products and services to working adults. The consortium acts as a training broker, acquiring content from traditional institutions of higher education or even corporate universities, and then offering this back to the open market in the form of an electronic education mall. In this scenario, corporate universities as well as traditional universities become both customers and suppliers to the consortium.

A variety of incentives can motivate companies to form a consortium. The following best practice example, The Global Wireless Education Consortium (GWEC) brings together companies with common interests to create an educational solution for an entire industry. GWEC was formed in late 1996 by the founding partners Ericsson, AT&T Wireless Services, Lucent Technologies, AirTouch Communication, and Motorola, along with Mankato State University, South Central Technical College, and the University of Texas at Dallas. Each company in this network has been confronted with the same problem: problems in recruiting and retention because of a huge and growing need for wireless technicians and engineers in an industry that is growing exponentially. Misty Baker, executive director of GWEC, stated: "This is a people problem and we can either sue each other, like the software industry is doing, or we can collaborate to solve the problem" (Meister, 1997, 219). The industry decided on a collaborative solution. GWEC represents an education model where corporations and academia come together as partners to solve a common problem. The consortium has been established as a means of effectively creating a pool of skilled wireless technicians. Additionally, the advantage of this collaboration is that the participating companies can share their costs for training development and high quality multimedia courseware.

Another best practice example represents the international education consortium UNext.com (www.unext.com). Unext stands for the "Next Generation University" and was created to deliver world-class education. . Whereas GWEC was initiated by companies to collaborate together and solve a common problem (internally focused), Unext offers E-Learning products to the open market (externally focused). The entrepreneur behind this start-up company is Andrew M. Rosenfield, a business consultant and University of Chicago Alumnus. The first investor for the company which was founded in December 1997, was Knowledge University (20 % ownership stake without voting rights, Guernsey, 1999, 24). It is a company which establishes and invests in companies delivering education services in all different areas (higher education, corporate training, consumer training, etc.). Under the brand name "Cardean" and "Cardean University" unext.com offers "next-generation" business courses online mainly to companies in association with academic consortium members, leading top business schools such as London School of Economics, Stanford University, Columbia University, University of Chicago and Carnegie Mellon. Members of the academic advisory board are Nobel prize winners Kenneth Arrow, Gary S. Becker and Merton H. Miller. The Internet is the basis for the learning processes and the knowledge transfer. The learning environment allows a combination of self-studies and interactive team work. Integrated feedback- and performance control systems

as well as the support of group work should help to provide a user- and student-centered learning environment.

4 E-Learning Trends and Success Factors

Corporate E-Learning is one of the fastest growing. While the market is currently relatively small and early-stage, it is poised to explode if one believes the forecasts. The online training market is expected to nearly double in size every year, reaching approximately \$ 11.5 billion by 2003 (International Data Corporation, 2000). However, the corporate E-Learning market is characterized by low market transparency and limited knowledge of E-Learning products and services. With new content providers, technology suppliers, and service vendors emerging on a weekly basis, it is becoming more difficult for companies to decide which E-Learning provider to choose. Quality, price, and sophistication of courses and technology vary widely. Transparency and information flow in the market are still low. Efficient means to compare dozens or even hundreds of similar courses from different vendors are not available. The E-Learning industry is an immature and dynamic market which is still in the defining process.

What are the key trends of this dynamic and intransparent E-Learning market? Whereas new E-Learning entrants mainly developed by deconstructing the education value chain, the trend is now towards convergence and "one-stop shopping" concepts. The major trends are summarized in the following.

Trend 1: Continuing Convergence

The further trend towards convergence in corporate training can be observed in different areas:

- Since corporate customers due to the increasing complexity of technology-based learning arrangements no longer want to employ several different content, services, and technology providers to meet their educational needs, training companies have started to integrate all three segments in their product portfolio in order to offer "one-stop-shopping concepts" (see trend 4),
- In the content segment the converging trend can be observed as well: whereas many IT training vendors are expanding their product lines with management and soft skills training, soft skills training providers have begun to spread out in the technical arena.
- a number of major corporations have initiated to centralize their training departments, which entails closing down their stand-alone IT training divisions and integrating them into their core corporate training groups (e.g. by building Corporate Universities), and
- E-Learning and traditional classroom learning are "blending" that means finding an optimal combination of both concepts rather than one ruling out the other. The strongest use of online learning with added-value education services seems to be an extension rather than a replacement for classroom training.

Trend 2: Market Consolidation

The global E-Learning sector comprises approximately 5,000 participants offering every imaginable method of E-Learning. No single competitor in the e-training market accounts for 5 % market share or more. Recognizing their inefficiencies, market participants have started to consolidate. The currently valid business strategy on the E-Learning market seems to be deeply connected with answering the question "eat or be eaten". A highly fragmented market, long development cycles, and other inefficiencies make the E-Learning industry attractive for more intense Mergers & Acquisitions (M&A) activities.

Small size not only might result in inefficient production but also preclude from creating and capturing brand recognition and market share quickly enough. Another reason for consolidation is the increasing tendency of corporate customers (see continuing convergence) to satisfy all their training needs by one single supplier. Due to the market pressure to be able to offer a complete E-Learning solution, E-Learning vendors have to buy their way into skills and capacities they do not possess yet.

Trend 3: Branding as Key Strategy

One of the most important reasons why E-Learning hasn't tremendously taken off yet is that the E-Learning platforms are still very complex, knowledgeable and require immense investments (in terms of knowledge and needed time) for the decision makers. Due to the low market transparency and limited knowledge of E-Learning products customers will likely be seriously challenged in the next several years. The implication might be that companies prefer the "safe choice" and retain E-Learning providers with established brand names. Brand is and will continue to be the most important factor influencing the competitive landscape. Corporate customers will be willing to pay a higher price for a quality product to avoid even costlier mistakes. E-Learning providers are currently addressing the main factors constituting a brand, such as quality, consistency, competency, reputation, and a loyal and recognized customer base (Ziegler, 2001). Customers are increasingly demanding customized training. E-Learning success factors include a well-known brand name that stands for quality, differentiated service offering, large direct sales force, and strong partnerships across the value chain.

Trend 4: "One-stop Shopping" and Added-Value Services

Corporations increasingly demand a more comprehensive "one-stop-shopping" approach to meet their training needs which leads to convergence effects within the E-Training industry (see trend 1). As Internet-based learning becomes an increasingly popular method of delivering training courses, customer priorities are shifting away from stand-alone training courses to more comprehensive and convenient E-Learning solutions more often embedded in knowledge management concepts. Currently mostly demanded services are for example curriculum design and development, pre- and post-training mentoring, coaching and support, training effectiveness analysis, reporting and tracking tools, and advisory services on how to integrate new e-training solutions into an organization's education strategy.

Trend 5: E-Learning Partnerships and Strategic Alliances

While many players favor M&A activities, another strategy on the E-Learning market seems to be a trend. Content providers are entering into strategic alliances and partnerships with education technology vendors, training services suppliers, or other content providers to enhance their product offerings, expand their distribution channels, explore new market segments, and capture a larger share of fast growing IT and soft skills training markets. Others are going together with learning portals or even diversified E-Commerce websites, leveraging their distribution channels in order to reach a broader audience. However, part of the value of a partnership is its exclusivity. Currently one might be under the impression that more or less all the players are partnering with each other. Thus, it is doubtful whether partnerships that are easily replicable truly lead to a significant value proposition.

Trend 6: Modularization and Standardization

Modularization of courses and content (knowledge and learning objects) has been a trend for several years. Content and courseware must be reusable, interoperable, and easily manageable at many different levels of complexity throughout the online instructional environment. Corporate customers need to be able to easily track content created by multiple content providers through one training management system and search vast local or distributed catalogs of content to identify learning objects or modules on a particular topic. Modularization of content is the key prerequisite to be addressed. Technology infrastructure varies widely and lack of compatibility between existing learning technologies and current infrastructure is one of the main barriers to adopting web-based training. Open standards is crucial to the continuing successful adoption of E-Learning, especially as it begins to transition beyond early adopters into the rapid growth phase of the market. Authoring tools will need to operate across different platforms and communicate with other tools used to build learning systems. The technological barriers are diminishing by standardization including modularization of content.

Trend 7: New Learning Models, Communities

One of the highest growth in online learning is the creation of Internet-based meeting places for instructor-led classes to provide community, communication and supplemental materials online (Palloff et. al., 1999, 11). Analysis how the Internet has power to build Communities are only at the beginning. However, one of the biggest challenges for university and corporate learning is labeled under the new buzzword "blended learning" how to combine ingeniously the "traditional" teaching methods with the "new" internet-based world. An increasing number of educational institutions and corporations are utilizing online authoring and delivery systems to build surroundings, learning environments which support efficiently the learning and communication process among students, peers, tutors, web-coaches, instructors, etc. New learning models facilitate studying, note taking, class discussions, and "catching up", all of which enhance classroom instructions.

Trend 8: Scalable Business Models

To capture significant market share, it will be imperative for training vendors to leverage their branded content by making it scalable in terms of development, delivery technology, and/or distribution. Scalable business models should be more profitable in the long run. Successful companies emphasize the production of quality off-the-shelf content using template-based, reusable learning objects to speed up the development. In addition, market participants who license their teaching products to organizations in volume, deploy a course delivery platform able to support millions of users, and utilize multiple and effective distribution channels should be able to enjoy an exponentially growing revenue stream and significant economies of scale. Thereby, these players not only benefit from reduced development cost per unit but also minimize time-to-market, which is a critical competitive factor in the fast-paced world of the Internet.

5 Conclusion

This contribution has shown that the trends in the educational market, especially caused by E-Learning developments, run towards a more competitive for universities and educational organizations. Recently, the traditional players, such as universities, see themselves confronted with international competitors not only from their field, but as well from the hard- and software industries, the media industry, and training departments and

institutions, which establish corporate and virtual universities. The line between academic and corporate training is blurring: many universities will invest and focus on continuing education as well and cooperate additionally with E-Learning vendors.

The most promising market within the education industry seems to be the E2B market, corporate E-Learning. Companies face more economic and social pressures to find new ways of training delivery fewer regulatory, bureaucratic, financial, and technical barriers to implement E-Learning solutions than other segments of the education industry. In corporate settings, increasing global competition, rapid technological advances, demographic changes, and the emergence of a service- and knowledge-based economy force organizations to train and re-train their workforce in new ways. Definitely, the Internet provides companies and universities numerous possibilities for leveraging knowledge and education resources in the context of lifelong learning (Maehl, 2000, 21). It redefines E-Learning not only in terms of an easier delivery worldwide, but also more current, dynamic educational content, more personalized, based on relevant learning experiences, and more collaboration forms with experts and peers. But currently it is still a relatively small and immature industry. The consolidation process is still going on in a dramatic speed and it is hardly feasible to predict exactly the market. Whereas I doubt the exponential growth many forecasts prognosticate, I am convinced that E-Learning will become a stable, consolidated and more transparent market with several market leaders and with some strong market niches.

The main purpose of this contribution was to analyze the changing educational market from an E-Learning perspective (section 2), to give an overview of new arousing models for E-Learning strategies (section 3), and to investigate E-Learning trends and critical success factors which may mostly influence the further E-Learning development (section 4). Finally, this last section should conclude some further considerations and fundamental implications for institutions of management education as well as for management educators. E-Learning can be seen as a new challenge for universities and companies in the training industry.

This challenge will impact *Institutions of management* as summarized below:

Given the recent changes in the education market, universities and educational organizations should think of their E-Learning strategy and their positioning in the E-Learning market. Usually, the above-described business models for E-Learning are not found as single only forms of E-Learning activities. For example, many universities support several forms (e.g. cooperation strategies in building strategic alliances, founding spin-offs, offering customized management courses, etc.). It is important for educational institutions to keep in mind their reputation when choosing an E-Learning strategy. The strategic decision has to be accompanied by a marketing strategy that emphasizes the image of the university or training company and its services.

Furthermore, the E-Learning challenge will impact *management educators* in university and corporate settings:

Educators will be confronted with a changing role in E-Learning environments. While technology-based learning is unlikely to completely replace the school and university experience, it offers more opportunities for corporate training and continuing education. However, the role will change: management educators will become facilitators, offering guidance and motivation strategies for students who should get used to self-organized

study techniques. Educators will be more engaged in providing additional educational services (e. g. dynamic update of knowledge databases, transparent and clear syllabi, reading recommendations, microarticles, etc.) in order to support information and communication processes in learning settings. Human interaction is a critical component for learning. Face-to-face contact is still not comparable with meeting each other on the web. There are situations in which classroom training cannot be replaced. Certain content because of its nature, relative value, or importance, is not suitable for technology-based delivery. Certain groups of employees do not want to miss the "edutainment value" of live experience and desire the total interactivity with a human trainer. Others are simply uncomfortable with computers. For a number of individuals, technology-based training is not the most efficient learning method due to their learning style. The classroom also provides guidance and structure. These elements are important for individuals who lack the motivation and confidence to succeed in a self-study-only program. E-Learning may require more dedication and discipline. Often either the organizational environment and climate block efficient learning processes or individuals are likely not trained enough in self-organizing their studies. Frequently, it also does not yet reach the degree of interactivity and collaboration offered by classroom training. Despite these shortcomings E-Learning is a practical and convenient way without time and place barriers for the delivery of content and value added education services. Therefore E-Learning will find its place in the education and training industry. The existing shortcomings of E-Learning will force educators to develop improved pedagogic models and techniques for online learning environments in order to bring measurable participation and results. Media and communication competencies appear to become a key qualification for management educators in online settings (Seufert et. al., 1999, 23).

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