

E-Learning Business Models
Framework and Best Practice Examples

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ABSTRACT

According to several forecasts given by Gartner Group or International Data Corporation for example, E-Learning as a new buzzword for web-based education and its commercialization seems to be a growing market in the digital economy. This case study will analyze this new and dynamic E-Learning market and the corresponding changes on the education market. A framework of the different education models which have already developed on the E-Learning market will be introduced and their benefits and risks discussed. Several cases demonstrate the new E-Learning models in action. Therefore, this contribution consists of several smaller cases which can be used for getting an overview of the E-Learning market and for a discussion about E-Learning as a promising E-Commerce application on the Internet.

INTRODUCTION AND MOTIVATION

The globalization of education is increasing rapidly: Students attend courses from all over the world, employees work and study globally in multinational companies. Due to the interactivity and ubiquity of the Internet, learning is possible without space and time barriers. 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 might become a major export factor between countries (Seufert, 2000). The competition between universities is increasing more and more and universities are under 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. The business environment is going through a dramatic transformation due to the increased complexity, and uncertainty of the radical changes in information technology, globalization, changing customer demands (and customer knowledge), increased expectations for social responsibility, and other changes that are placing new stresses on the organization and its people (Glotz, 1999). Multinational companies already train their employees via online learning networks globally. E-Learning as a new buzzword for web-based education and its commercialization (e. g., business strategies, technologies, applications, etc.) is 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 the new-mega mergers, new business models, re-engineered and reinvented organizational forms, and other changes of the business environment. The rise of the cyberconsumer has shifted power from producers to consumers, radically altering the nature of industries. Training, especially connected with knowledge management strategies, is a central activity of the successful 21st century firms.

New E-Learning strategies are needed to react to the changes in a competitive and global education market. This will fundamentally reshape the role of training and education and create enduring advantages for firms, universities and institutions that adopt the new learning paradigm. The purpose of this chapter will be (a) to introduce the changes in the education market and the new learning paradigm, (b) to explain E-Learning as the convergence of several forces, (c) to outline a framework for E-Learning business models for the

implementation of the changes, and (d) to demonstrate and compare best practice examples for the different E-Learning business models. Thus, this chapter encloses several smaller cases instead of one big case study.

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 (Seufert et. al., 2000). E-Learning may be defined as internet-based learning where the student and instructor are not necessarily face-to-face. Interaction with the instructor and with other students may occur via videoconferencing or teleconferencing. When using computers, interaction may take place in asynchronous (email or bulletin board) sessions or synchronous (chat room) sessions. Still other technologies for distance education include the more traditional methods of closed circuit television or mailed videotapes. The intent of the instructor in these long distance environments should be to create a community of learners where students interact with each other and the instructor just as if they were together in reality. In summary, there are many avenues through which E-Learning may take place. E-Learning might be defined as net-based learning on the basis of electronic media including commercialization aspects (Bullinger, 2001).

E-Learning has been established as a new "buzzword" which is 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. In fact, 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 (Schneider, 2000). John Chambers,

president and CEO of Cisco systems promotes E.Learning on the corporate website (www.cisco.com): "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." E-Learning is seen by many experts as the future "killer application" of the Internet. Peter Drunker said "Online continuing education is creating a new and distinct educational realm. There is a global market here that is potentially worth hundreds of billions of dollars."

Why do all forecasts agree on the dramatic growth of E-Learning? Firstly, 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 causing factors. Secondly, the experience with the "dot.com revolution and later disillusion" shows that one should be careful to trust such forecasts. Perhaps they might only correspond to the pure wishful thinking of educational organizations and companies on the wave of a new hype – E-Learning as the killer application of the Internet.

BUSINESS MODELS FOR E-LEARNING STRATEGIES

Convergence of the Educational Market

E-Learning represents the convergence of many factors from different fields, for example technological drivers, changes in society, changing corporate training and the new learning paradigm in the context of life-long learning which describes the shift from training to learning. Conversely, the growth of E-Learning has an converging effect on the educational market (c. f. fig. 1). The once almost visible line between corporate training and higher education is blurring. Distance education is causing this convergence. Kaeter (2000) suggests that this convergence is creating a common battlefield for colleges, corporate universities and

for-profit education businesses. The development of corporate-college partnerships around online learning offerings is opening up new roles for academic institutions to play. Students benefit from being able to choose from among the best programs in the country (or world), instead of being limited by geography and time.

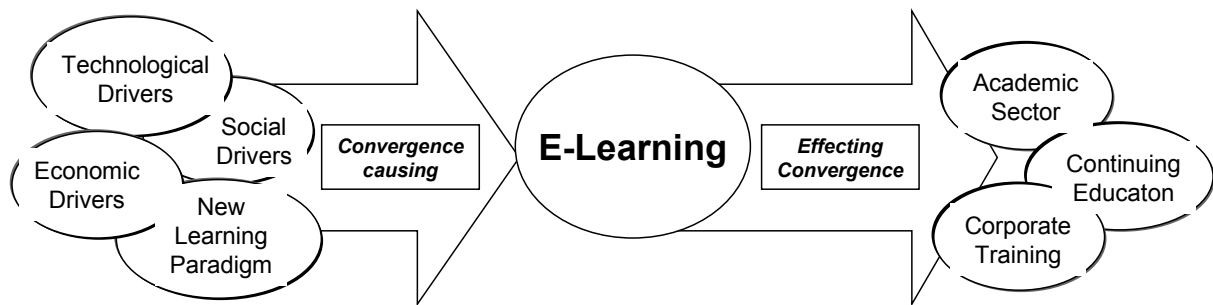


Fig. 1: E-Learning Convergence

What are the challenges and strategies for universities and for companies? Who are becoming competitors in an converging education market? Who are the key players of E-Learning?

What are the new business models in this converging market?

First of all, the term “business model” has to be clarified. The literature about electronic commerce is not consistent with the usage of the term "business model". Timmers (2000) gives the following definition of 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 this definition the different business models for E-Learning will be introduced and explained in the following.

Framework of E-Learning Business Models and Best Practice Examples

The educational market landscape has developed several models to produce and deliver educational products. Some have their roots in the academic sector, some in the business sector. But as noted in the previous section and as the following figure illustrates, the line between both sectors, academic education and corporate training, is blurring. As 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 new ways of delivering education such as "Virtual Universities", "University Networks", "Corporate Universities", "Education Providers" and "Education Consortiums".

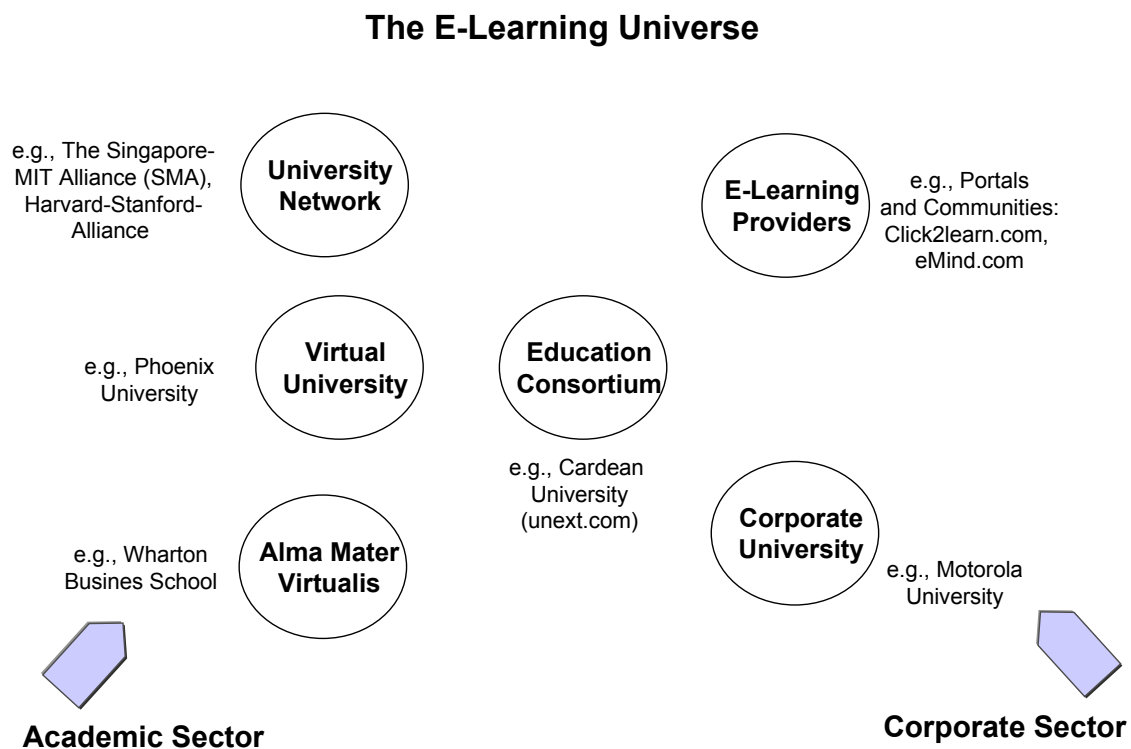


Fig. 2: Educational Market Landscape

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

- E2B = Education to Business (corporate E-Learning): target groups are companies and their training institutions.
- E2E = Education to Education (university E-Learning): target groups are universities, professors and other educational institutions.
- E2C = Education to Consumers (private E-Learning): target groups are private consumers, students who learn with online courses and materials.

Alma Mater Multimedialis

"Traditional" universities, the "classic alma mater", might likely exist in two different forms in the future. First, only a few elite institutions, Centers of Excellence, will be concentrated on the global market specialized in a certain area. Education will be considered as customized learning provided by the best "masters" in a field. Second, the alma mater will survive offering a lower education quality confronted with a global competition from the academic and corporate sector. The traditional university can develop into an "Alma Mater Multimedialis" by creating a learning and community platform for its students and developing a library of online courses (Paloff and Pratt, 1999). The term "*Alma Mater Multimedialis (or Virtualis)*" stands for a campus-based university which uses new media and communication technologies for teaching and research in innovative ways. Hybrid-concepts are 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 lays in better study conditions and the improved personal contact of the students to their professors and tutors.

The business actors are mainly universities and private students which means that the "Alma Mater Multimedialis" represents a typical form of E2C Business. E2B-business plays mostly a role in the field of executive education. Especially the elite institutions will offer and deliver executive education modules to companies and to other universities (E2E-Business). The sources of revenue are mainly university fees and fees for courses and E-Learning products. Five models are suggested as a framework for "traditional universities" to use to develop online courses and to act on the E-Learning education market:

- Classic approach

The classic approach follows the traditional tuition reimbursement model in that students apply for a particular degree or set of course offerings, are admitted, and register for their courses. Students take courses from the college's standard curriculum, but take their courses at a distance. In this model, at a distance usually means that students are sent videotapes of faculty members' lectures in "live" classes or in an empty TV sound stage. Courses usually have a synchronous component, where students discuss topics in chat rooms, or critique papers and projects in a team setting. The benefit for the university in this model is that they develop a library of courses they can literally "pull off the shelf" for course delivery. Also, universities can bring in "guest lecturers" from academia or industry via videotape or live video feeds.

- Cooperative approach: Cooperation with Educational Providers

Educational portals, or use of a website to offer curriculum, gives students access to a variety of courseware offerings, regardless of the originating source (Kaeter, 2000). 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.

Until recently, the courseware in this environment was minimally customized. Corporate clients and executive education seem to be the main focus of this delivery system. However, more than 200 universities, including Johns Hopkins and the University of Pennsylvania, have contracted with portal providers, such as HungryMinds.com or Ecollege.com (Kaeter, 2000). Ecollege.com offers a platform for courseware delivery and supports Internet based education. Now 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.

- Tailored Training approach

While the first two models proposed tend to involve large-scale libraries of online courseware, the tailored training approach allows the university to offer a curriculum that is focused to the needs of the corporate client. Certificate programs allow students to master a specific piece of information, and usually use that information at work the next day.

Accountability and demonstrable achievement are important tenets of this model. Pat Postma, Assistant Dean of Degree and Nondegree Executive Education at the University of Tennessee's College of Business, stated that certificate degrees benefit both the student and the corporation. "Companies want more certificate programs because it shows that people have mastered something...Employees want it too because they can show competence on a resume" (Kaeter, 2000, p. 120). Duke University uses this approach, and rounds out their executive education program offerings by putting basic information (like reading a balance sheet) on the web. Then students who need that resource can access it, others who don't can ignore it (Kaeter, 2000; Schneider, 2000).

- For-Profit approach: Education Providers

This model involves the university spinning off business ventures to pursue the market. In Bloomington, Indiana, a company named Wisdomtools.com was founded when the Indiana University's Center for Excellence in Education decided that its research had produced a viable commercial product for student interaction in a distance classroom (Kaeter, 2000). Duke has also spun off Duke Corporate Education, Inc. in order to run its custom executive education program (Schneider, 2000). Duke's plan is to repackage the materials it creates for executives into online courses and market courses to the general workforce. Babson College in Wellesley, Massachusetts will also create a company to put content on the web that will support part-time M.B.A. students and corporate clients. As the market for online education grows, and it will by all accounts, more universities will consider for-profit options as a serious alternative. In the end, the business model is the same as education providers and will be analyzed in detail in section 3.2.5.

- Cooperative approach: University Approach

Traditional universities have the option to cooperate with other universities in developing course material and E-Learning products. The benefits of this approach are sharing costs and reaching a critical mass of students for a specialized study program. This approach leads to the business model "University Networks" which will be explained in 3.2.3.

In the US more than two-thirds of universities offer online courses for their students (Wilbers, 2000). Some websites have already been established to function as "clearing houses". They catalogue available courses which are offered worldwide over the Internet. The World Lecture Hall (<http://www.utexas.edu:80/world/lecture/>), for example, lists several hundred online courses. Another website is Ed/x (<http://www.cd-x.com>) as a global resource for information about E-Learning and online courses.

Wharton Business School of the University of Pennsylvania in Philadelphia (www.wharton.upenn.edu) serves as a best practice example. Wharton is one of the leading business schools world-wide and has initiated several Internet-projects to strengthen its leading position and to become the leader in technology for academic research (Aragon and Lauwrence, 1997). Wharton IS manager Kendall Whitehouse built the desktop environment and intranet-based information service "Spike" for students (Aragon 1997). 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 research database "knowledge@wharton" and the internet-based business data service "Wharton Research Data Services (WRDS)".

The following table compares potential benefits and pitfalls of this E-Learning model “Alma Mater Multimedias”:

<i>Potential Benefits</i>	<i>Potential Pitfalls/Risks</i>
<p><i>For Universities</i></p> <ul style="list-style-type: none"> - Enhancing potential customers: (non-regional) students studying from a distance, cooperations with companies and other educational organizations. - Higher flexibility in organizing study programs. - Marketing aspects: innovative approach for universities, high competition in a global market <p><i>For Students</i></p> <ul style="list-style-type: none"> - Increased communication: more channels 	<p><i>For Universities</i></p> <ul style="list-style-type: none"> - Hybrid Solution: expensive, how to combine the virtual and the real world? - High risk of technological problems and access problems. - Professors are not used to new media technologies, high investment at the beginning. - Quality system, evaluation measurement, more difficult in an online environment. <p><i>For Students:</i></p> <ul style="list-style-type: none"> - Less social contact, professors have more

<p>to communicate with professors, tutors</p> <ul style="list-style-type: none"> - Higher flexibility: if self-study components are integrated into the curriculum. - Learn skills needed to self-organize studies, how to learn with new media, better support for self-study, good preparation for life-long learning. 	<p>possibilities to escape and to delegate (to tutors, for example).</p> <ul style="list-style-type: none"> - Information overflow: students are lost in “hyperspaces” - Higher fees for the technological infrastructure.
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Virtual Universities

The term "virtual university" is often not clearly defined (Porter, 1997) and used for a wide range between "conventional" campus-based universities offering online courses ("hybrid" institutions) 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 to deliver its programs and courses and provide tuition support (Ryan et. al., 2000). They belong to the academic sector, are often accredited and core activities are the same as 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 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 (Maehl, 2000). 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 conventional presence 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 which offers online courses or course components within a curriculum program. This model is very similar to the Alma Mater Multimedialis model. The E-Learning strategy is organized university-wide and the program complementary to the conventional university.

- Model 3: Cooperative Approach: Virtual University Networks

Several traditional campus-based universities are the founding partners of an additional virtual university. This model is a special type of university network which will be explained in 3.2.5.

- Model 4: Cooperative Approach: Cooperation with Educational Providers and/or

Consortiums

In this scenario, the virtual 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.

Virtual Universities are already widespread in Great Britain where they have a long tradition. The Open University (UK) (<http://www.open.ac.uk>). was formed as one of the first Virtual Universities in 1989 offering a distance study programme to a mass of students. The target group of the Open University are working adults and continuing professional education, mainly in the subject fields business administration and information technology. It currently enrolls more than over 20,000 online students and is the largest educational institution in Great Britain. Students work with self-study material in a structured way and in small groups

of 3 to 4 students who correct the weekly homework mutually before they are given to the instructors. High-quality study material is one of the leading goals the Open University tries to achieve and cooperates with companies like BBC and their TV studios. The personal support by online tutors is another crucial success factor which is facilitated by worldwide networks and residential schools. The development of modular E-Learning components for mass production leads to flexible study programme structures.

In the meantime, almost all over the world Virtual Universities have been founded: for example in Hong Kong, Singapore, Moscow, Australia, Colombia, Costa Rica, Finland, Hong Kong, Israel, the Netherlands, Pakistan, South Africa, and Venezuela. They are especially important in countries with huge territories and difficult to reach regions because they make access to education easier.

<i>Potential Benefits</i>	<i>Potential Pitfalls/Risks</i>
<p><i>For Universities:</i></p> <ul style="list-style-type: none"> - Investment in technological infrastructure is cost-efficient (saves salary costs). - Focus on Virtual world: easier to implement and to organize university-wide, no resistance by professors. <p><i>For Students:</i></p> <ul style="list-style-type: none"> - Higher flexibility and individualized learning: The Online program is designed to benefit working adults: they can study at any time, anywhere, at his or her own speed. There are no semesters, so students can begin a course of study any month of the year. - Good preparation for life-long learning skills, students learn new media and 	<p><i>For Universities:</i></p> <ul style="list-style-type: none"> - High investment for tutors and coaching to support students (necessary for a high quality program). - Danger: just putting books and course material online instead of using the internet as interactive medium for innovative teaching methods (Berge 1998). - Quality system, evaluation measurement, more difficult in an online environment. - “Brand” of virtual university degrees only vaguely clarified, some positive examples exist. <p><i>For Students:</i></p> <ul style="list-style-type: none"> - Less social contact, difficult environment for community building, students might miss

communication competencies.	<p>not being able to study with permanent peers (difficult to develop friendships).</p> <p>- High motivation and self-discipline is necessary, might lead to a higher drop-out-rate.</p>
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University Networks

E-Learning effects 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 (Seufert and Seufert, 1999). 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 within the network (E2E business). The multimedia format of the products is usually not of the same high quality standard as in 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 discovered the continuing professional education market, but they mainly offer their courses to small and medium-sized enterprises (E2B business) which can't afford the development of online course on their own. At present, the main focus of existing university networks is the development of specialized study programs such as an MBA program 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 case 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.

<i>Potential Benefits</i>	<i>Potential Pitfalls/Risks</i>
<p><i>For Universities:</i></p> <ul style="list-style-type: none"> - Sharing the development costs of online courses (economies of scale). - Gaining a competitive advantage in a highly competitive market. <p><i>For Students:</i></p> <ul style="list-style-type: none"> - Easy access to a different culture: exchange programs, study with peers in a different culture. - Double degree programs are sometimes included. - Learn new media and communication competencies. 	<p><i>For Universities:</i></p> <ul style="list-style-type: none"> - High investment at the beginning to establish the organization and infrastructure. - Coordination costs and problems, overhead costs. - Technological problems, cultural communication problems. <p><i>For Students:</i></p> <ul style="list-style-type: none"> - Coordination, technological and cultural communication problems.

Corporate Universities

While the first corporate university was founded 40 years ago 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). Over the last ten years the number of corporate universities has more than doubled from 400 to 1000.

As business actors can be considered companies as well as their training departments which might 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 (Aubrey, 1999). 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 if 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".

In literature, many typologies of corporate universities have already been introduced. Based on the common frameworks developed by Aubrey (1999), Fresina (2000) and Deiser (1998) five models are suggested in the following:

- *Model 1: Training Department, Qualification Center:*

- Target group: all employees, internally 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, face-to-face 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 reduced as 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.

- Model 4: 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).

- Model 5: 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 well-known example, Motorola University represents a combination of a qualification center and a learning lab. Motorola University was established 1981 and designed as a "center for strategic thinking and a major catalyst for change" (Aubrey, 1999). 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 - the 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 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 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.

<i>Potential Benefits</i>	<i>Potential Pitfalls/Risks</i>
<p><i>For Corporate Universities:</i></p> <ul style="list-style-type: none"> - Development of online courses for many students in a multinational and global company (economies of scale). - Quality of online courses are usually higher than university online courses. -Human Resource Development: innovative approaches, certification and degrees as incentives for employees. <p><i>For Students</i></p> <ul style="list-style-type: none"> - Higher flexibility and individualized learning, easy access, study any time, anywhere, at his or her own speed. 	<p><i>For Corporate Universities:</i></p> <ul style="list-style-type: none"> - High investment at the beginning to establish the organization and the technological infrastructure. - Corporate University = very often nothing else than a trainings department under a new label. - Difficult to connect with corporate strategy: implementation problems. <p><i>For Students:</i></p> <ul style="list-style-type: none"> - Less social contact, less face-to-face seminars for informal idea exchange and come-together events.

<ul style="list-style-type: none"> - Certification and degrees as incentives to join a company. - Good preparation for life-long learning skills, students learn new media and communication competencies. 	<ul style="list-style-type: none"> - High self-organization on the job: environment is not a learning culture, employees are not able to organize their self-studies.
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Education Providers

Commercial suppliers or education providers represent E-Learning ventures mostly as new entrant E-Learning players. As mentioned in section 2, E-Learning has the potential to become the killer application of the Internet. 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 can take the role of suppliers or customers. The whole portfolio of E-Learning business categories is represented in the following:

- *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*: Customers 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 as the following figure demonstrates.

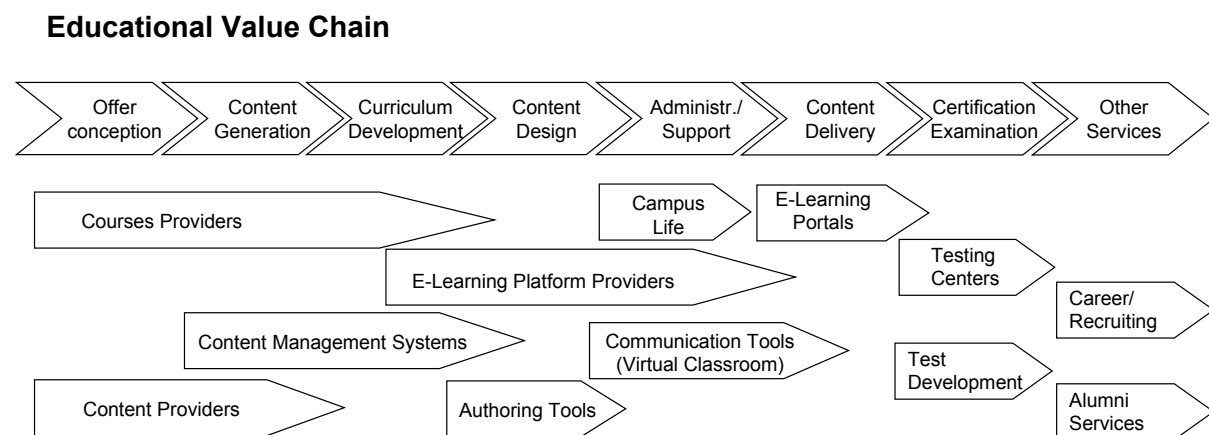


Fig. 3: Examples of New Entrant E-Learning Players

Different internet-based education business models which have emerged seeking to offer the benefits of the Internet and three basic models are suggested in the following:

- *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 from offer conception, to content and curriculum development, content design and delivery to 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. Usually, this model represents a strong network of academic and corporate partners (Wilbers, 2000). Corporate universities, traditional universities, other education providers belong to the partners who can be both customers and suppliers. In this sense, the brokerage form of E-Learning providers might be identical with education consortiums which is explained in the following 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 promising case 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 - not yet available to the individual. University professors help to develop the content and Quisic offers 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 university or corporate fees and institutional funding. In the education market for four years, Quisic continues to grow as it recently purchased IEC, a 17-year-old custom corporate training development company. Quisic is also planning to deliver courses with Educavia 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.

<i>Potential Benefits</i>	<i>Potential Pitfalls/Risks</i>
<i>For Education Providers:</i>	<i>For Education Providers:</i>

<ul style="list-style-type: none"> - New business models and cooperation forms with universities are promising, e. g., University delivers content, education provider specializes in media production. - Gaining a competitive advantage, a well-known “brand” in a highly competitive market. <p><i>For Consumers:</i></p> <ul style="list-style-type: none"> - New business models for Universities: easier access to high-quality material. - Higher flexibility and individualized learning for their students, easy access to courses and material, study any time, anywhere, at his or her own speed. - Good preparation for life-long learning skills, students learn new media and communication competencies. 	<ul style="list-style-type: none"> - High competition and sources of revenue are limited, very dynamic market. - High investment in technological infrastructure is necessary for high quality products. <p><i>For Consumers:</i></p> <ul style="list-style-type: none"> - Difficult decision process: who has the right material, high-quality products? Is “brand” the only decision instrument in a dynamic and intransparent market? - Integration in the “real” world: how to implement the online courses and material into the existing curriculum.
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International Education Consortium

The international education consortium is a group of companies who come together to pool their training resources and together offer these to working adults. Consortium act as training brokers, acquiring content from traditional institutions of higher education or even corporate universities, and then offer this back to the open market in the form of an electronic education mall with reference to Timmers business models (1998). Brand information is common across many suppliers in the mall which means that a well-known brand functions as a common umbrella. In this scenario, corporate universities as well as traditional universities become both customers and suppliers to the consortium.

The building of a consortium can be motivated differently. The following example is based on a concept that brings together companies with common interests to create an educational solution for an entire industry (Meister, 1998). The Global Wireless Education Consortium (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 had been confronted with the same problem: a great deal of difficulty with 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". The industry decided for 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 case 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). Unext was founded in 1997 and is 20 % owned by the company "Knowledge Universe" - 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 Arrow, Becker and 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.

<i>Potential Benefits</i>	<i>Potential Pitfalls/Risks</i>
<p><i>For Consortiums:</i></p> <ul style="list-style-type: none"> - Sharing the development costs of online courses (economies of scale). - Gaining a competitive advantage in a highly competitive market: building a well-known "brand" based on strong partnerships with top business schools. - Quality of online courses are higher than conventional university online courses. <p><i>For Students</i></p> <ul style="list-style-type: none"> - Higher flexibility and individualized learning, easy access, study any time, anywhere, at his or her own speed. - Certification and degrees based on material from top business schools as incentives. - Good preparation for life-long learning skills, students learn new media and communication competencies. 	<p><i>For Consortiums:</i></p> <ul style="list-style-type: none"> - High investment at the beginning to establish the organization and the technological infrastructure. - For high quality products cost-intensive online tutors and coaching programs are necessary. <p><i>For Students:</i></p> <ul style="list-style-type: none"> - Less social contacts, decreasing motivation in an online environment, higher self-discipline necessary, perhaps higher drop-out rate. - Is the "brand" really a good indicator for efficient learning and didactic appropriate settings?

CONCLUSION

The E-Learning market is still small, but rapidly growing in all customer segments and geographies if one trusts the forecasts. The current E-Learning landscape is concentrated on the U.S. and the corporate segments, especially the IT training which is the largest subject segment in corporate training, where competition is already fierce but still fragmented (Brockhaus et. al., 2000). "Content is king" has become a famous expression to demonstrate the growing importance of content creation as the largest supplier market segment. Customers are increasingly demanding customized training in a modular and flexible way. The impact of Internet needs strongly vary by segment. Key success factors are a well-known brand name that stands for quality, differentiated service offering, large direct sales force, and strong partnerships across the value chain.

Several E-Learning business models coming from the academic and corporate sector have been introduced and could be grouped into E2B-, E2E- and E2C-strategies. The landscape of the education market is still changing, converging and the line between academic and corporate sector is blurring. By deconstructing the educational value chain, new key players have entrance to the education market. The following figure compares the different E-Learning business models by analyzing in which field it is positioned (E2B, E2E, E2C) and the intensity of specialization and concentration on certain content subject segments.

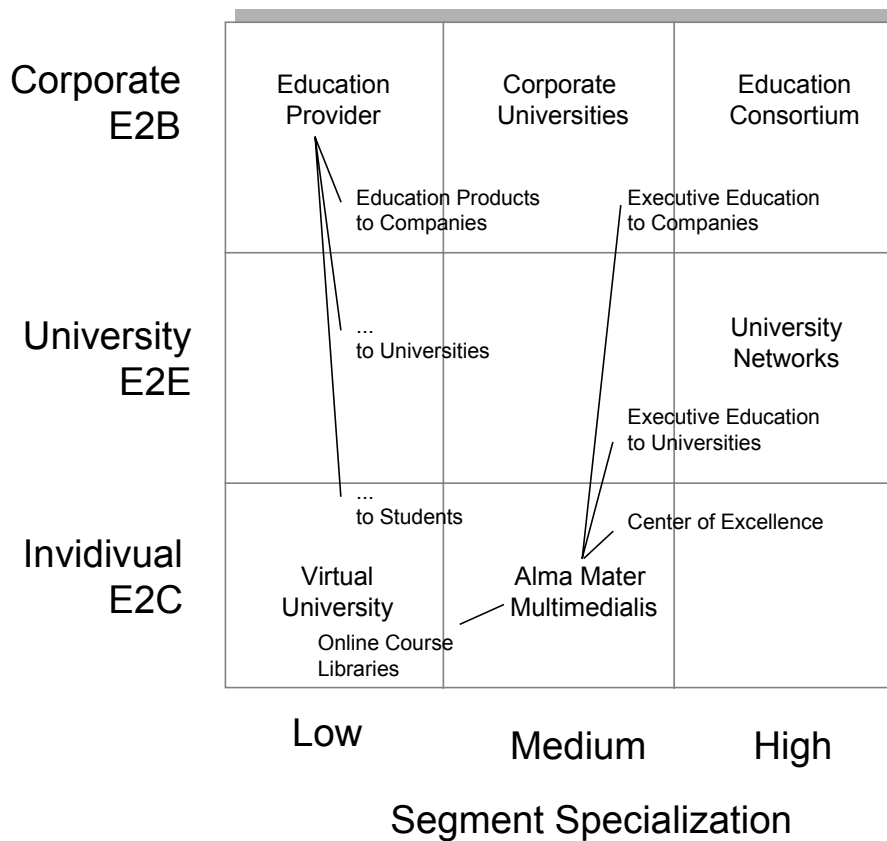


Fig. 4: E-Learning Business Models

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. Companies that deploy and effectively utilize E-Learning will have a distinct competitive advantage. The Internet presents companies with numerous possibilities for leveraging knowledge and education resources. It redefines E-Learning in terms of current, dynamic educational content, individualized and personalized, relevant learning experiences, and more collaboration with globally dispersed experts and peers (Schreiber, 1998).

However, shortcomings of E-Learning exist as well. Human interaction is a critical component for learning. 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. It is still an open question how efficient soft-skills can be trained

in an online environment. Certain groups of employees do not want to miss the "edutainment value" of live experience and desire 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, as their learning style is kinesthetic as opposed to visual. 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. Frequently, it also does not yet yield the degree of interactivity and collaboration offered by classroom training. However, for many companies seeking a reputable continuing education, this is not an issue anymore. Many of them are happy to put up with insufficiencies of distance learning in order to enjoy its unparalleled convenience. E-Learning may not be perfect, but it is practical. While technology-based learning is unlikely to completely replace the school and university experience, it offers a lot of opportunities for corporate training and continuing education.

The most promising market within the education industry might be corporate E-Learning, E2B market. Companies face more economic and social pressures to find new ways of training delivery, and fewer regulatory, bureaucratic, financial, and technical barriers to implementation of E-Learning than other segments of the education industry. The most successful E-Learning models of the future will likely be hybrid E-Learning networks that are combinations of academic, professional and corporate content.

References

Aragon, L. (1997). Wharton's Information Spike. Case Study: Collaboration between students, IT spawns intranet app that simplifies mundane tasks. PCweek 14 (41), 3-6.

- Aubrey, B. (1999). Best Practices in Corporate Universities. In: Neumann, R., & Vollath, J. (Eds.), Corporate University. Strategische Unternehmensentwicklung durch massgeschneidertes Lernen, Ahrendt et. al.: A&O des Wissens, 33-55.
- Berge, Z. L. (1998). Conceptual Frameworks in Distance Training and Education. In: Schreiber, D. A., & Berge, Z. L. (Eds.), Distance Training. How innovative Organizations are using Technology to maximize Learning and meet Business Objectives, San Francisco: Jossey-Bass, 19-36.
- Brockhaus, M., Emrich, M., & Mei-Pochtler, A. (2000). Hochschulentwicklung durch neue Medien - Best-Practice-Projekte im internationalen Vergleich, in: Bertelsmann (Eds.), Online Studium, 137-158.
- Bullinger, H.-J. (2001). Einsatz neuer Medien in der Personalentwicklung, Einführungsreferat des IAO-Forums "Betriebliche Weiterbildung mit digitalen Medien" am 22.02.01, Fraunhofer Institut, Stuttgart.
- Deiser, R. (1998). Corporate Universities - Modeerscheinung oder Strategischer Erfolgsfaktor? Organisationsentwicklung, 1, 36-49.
- Fresina, A. (2000). The Three Prototypes of Corporate Universities, www.ekw-hrd.com/3_Prototypes.pdf, 23.07.2000.
- Glitz, P. (1999). Die beschleunigte Gesellschaft. Kulturkämpfe im digitalen Kapitalismus, München: Kindler.
- Kaeter, M. (2000). Virtual cap and gown. *Training*, 37 (9), 114-122.
- Maehl, W. H. (2000). Lifelong Learning at its Best: Innovative Practices in Adult Credit Programs, San Francisco: Jossey-Bass.
- Meister, J. C. (1998). Corporate Universities. Lessons in Building a World-Class Work Force, New York, et. al.: McGraw-Hill.

- Palloff, R. M., & Pratt, K. (1999). *Building Learning Communities in Cyberspace : Effective Strategies for the Online Classroom*. Cambridge: The Jossey-Bass Higher and Adult Education Series.
- Porter, L. R. (1997). *Creating the Virtual Classroom: Distance Learning with the Internet*. New York, et. al.: John Wiley
- Ryan, S., Scott, B., Freeman, H., & Patel, D. (2000). *The Virtual University*. London: Kogan Page, 2000.
- Schneider, M. (2000). Duke's B-School goes into business. *Business Week*, June 30.
- Schreiber, D. A. (1998). Instructional Design of Distance Training, in: Schreiber, D. A.; Berge, Z. L. (Eds.): *Distance Training. How innovative Organizations are using Technology to maximize Learning and meet Business Objectives*. San Francisco: Jossey-Bass, 37-65.
- Seufert, S., Back, A., & Häusler, M. (2001). *E-Learning. Weiterbildung via Internet. Das "Plato-Cookbook" für internetbasiertes Lernen*. Kilchberg: Smartbooks.
- Seufert, S., & Seufert, A. (1999). *The Genius Approach: Building Learning Networks for Advanced Management Education*. Proceedings of the 32nd Hawaiian International Conference on System Sciences, Hawaii.
- Seufert, S. (2000). Trends and future developments: Cultural Perspectives of Online Education. In: Adelsberger, H; Collis, B., & J. Pawlowski (Eds.) *International Handbook on Information Technologies for Education & Training*, Springer, Berlin et. al., Germany.
- Timmers, P. (1998). Business Models for Electronic Markets. *EM - Electronic Markets*, 8 (2), 3-8.
- Wilbers, K. (2000). Lernportale, universitäre Aktoren, Business Intelligence und m(obile)-Learning: Vier Herausforderungen des e-Learning. In: Esser, F. H., Twardy, M.,

Wilbers, K. (Eds.): e-Learning in der Berufsbildung. Telekommunikationsunterstützte
Aus- und Weiterbildung im Handwerk, Köln: Eusl, 396-431.