

EDU e-learn

Future analysis of the e-learning supply sector

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List of contents

1. INTRODUCTION	4
1.1. INTRODUCTION TO FUTURE SCENARIOS	4
1.2. METHODOLOGY	4
1.2.1. Construction of the scenarios	5
1.2.2. Identifying the implications in the scenarios	6
1.2.3. Validation seminar	6
1.2.4. Construction of the scenarios	6
2. SCENARIO 1: GLORY DAYS.....	9
2.1. TECHNOLOGY INTEGRATION	10
2.2. ECONOMIC CONDITIONS ARE GOOD	10
2.3. SOCIETY - CHARACTERISED BY COHESION.....	10
2.3.1. Life style.....	10
2.3.2. Educational system.....	11
2.4. WORKPLACE DEVELOPMENT – LONG-TERM STRATEGIC THINKING	13
2.4.1. Strategies and actions in traditional industries	13
2.4.2. Strategies and actions in knowledge intensive companies.....	13
2.5. E-LEARNING INDUSTRY STRUCTURE - HETEROGENEOUS	14
2.5.1. Distribution of power and influence in the value chain.....	14
2.5.2. New entrants.....	14
2.5.3. Dominating strategies.....	14
2.6. THE LABOUR MARKET – FLEXIBLE AND WELL FUNCTIONING.....	14
2.6.1. Government initiatives related to the labour market.....	14
2.6.2. Social partners initiatives related to Labour market.....	15
2.7. IMPLICATIONS FOR THE E-LEARNING MARKET/MARKET PERSPECTIVE AT A GLANCE	15
2.7.1. Market diagnostic.....	15
2.7.2. Nature of demand	15
3. SCENARIO 2: WAITING FOR BETTER TIMES	15
3.1. TECHNOLOGY – FRAGMENTED	15
3.2. ECONOMIC CONDITIONS – BAD.....	16
3.3. SOCIETY – FRAGMENTED.....	16
3.3.1. Life style.....	16
3.3.2. Educational system.....	17
3.4. WORK DEVELOPMENT – SHORT-TERM THINKING.....	18
3.4.1. Strategies and actions in traditional industries	18
3.4.2. Strategies and actions in knowledge intensive companies.....	18
3.5. THE LABOUR MARKET – FLEXIBILITY IS NOT WORKING	19
3.5.1. Government initiatives related to the labour market.....	19
3.5.2. Social partner initiatives related to the labour market.....	19
3.6. E-LEARNING INDUSTRIAL STRUCTURE - HOMOGENOUS	19
3.6.1. Distribution of power and influence in the value chain.....	19
3.6.2. New entrants.....	19
3.6.3. Dominating strategies.....	20
3.7. MARKET PERSPECTIVE AT A GLANCE	20
3.7.1. Market diagnostic.....	20
3.7.2. Nature of demand	20
4. SCENARIO 3: THE MISSED OPPORTUNITIES.....	21
4.1. TECHNOLOGY - FRAGMENTED	21
4.2. ECONOMY - GOOD	21
4.3. SOCIETY - FRAGMENTED	21
4.3.1. Life style.....	21
4.3.2. Education.....	22
4.3.3. Government initiatives related to e-learning.....	23

4.4.	WORK DEVELOPMENT – SHORT TERM	23
4.4.1.	<i>Strategies and actions in traditional industries</i>	23
4.4.2.	<i>Strategies and actions in knowledge intensive companies</i>	23
4.5.	LABOUR MARKET - FLEXIBLE	24
4.5.1.	<i>Government initiatives related to the labour market</i>	24
4.5.2.	<i>Social partners initiatives related to Labour market</i>	24
4.6.	E-LEARNING INDUSTRY STRUCTURE – HOMOGENOUS	24
4.6.1.	<i>Distribution of power and influence in the value chain</i>	24
4.6.2.	<i>New entrants</i>	24
4.6.3.	<i>Dominating strategies</i>	24
4.7.	MARKET PERSPECTIVE AT A GLANCE	25
4.7.1.	<i>Market diagnostic</i>	25
4.7.2.	<i>Nature of demand</i>	25
5.	SCENARIO 4: PRIVATE INITIATIVE IN THE DRIVING SEAT.....	25
5.1.	TECHNOLOGY - INTEGRATED.....	26
5.2.	ECONOMY – GOOD	26
5.3.	SOCIAL – COHESION	26
5.3.1.	<i>Life style</i>	26
5.3.2.	<i>Education</i>	26
5.3.3.	<i>Government initiatives related to e-learning outside the educational system</i>	28
5.4.	WORK DEVELOPMENT – LONG-TERM	28
5.4.1.	<i>Strategies and actions in traditional industries</i>	28
5.4.2.	<i>Strategies and actions in knowledge intensive companies</i>	28
5.5.	E-LEARNING INDUSTRY STRUCTURE – HETEROGENEOUS.....	29
5.5.1.	<i>Distribution of power and influence in the value chain</i>	29
5.5.2.	<i>New entrants</i>	29
5.5.3.	<i>Dominating strategies</i>	29
5.6.	LABOUR MARKET – FLEXIBILITY NOT WORKING.....	29
5.6.1.	<i>Government initiatives related to the labour market</i>	29
5.6.2.	<i>Social partners' initiatives related to Labour market</i>	30
5.7.	MARKET PERSPECTIVE AT A GLANCE	30
5.7.1.	<i>Market diagnostic</i>	30
5.7.2.	<i>Nature of demand</i>	30
6.	WEB-SURVEY ON THE FUTURE OF THE E-LEARNING SUPPLY MARKET IN EUROPE	30
6.1.	INTRODUCTION	30
6.2.	METHODOLOGY	30
6.3.	RESULTS	30
6.3.1.	<i>Market perspectives</i>	31
6.3.2.	<i>Technical perspectives</i>	32
6.3.3.	<i>Globalisation perspectives</i>	32
6.3.4.	<i>Educational and content perspectives</i>	33
6.3.5.	<i>Government policy perspectives</i>	33
7.	CONCLUSION	35
	APPENDIX	37
7.1.	APPENDIX 1: WEB-SURVEY	38
7.2.	APPENDIX 2: PERSONS THAT ATTENDED THE SUPPLIER SUMMIT IN BRUSSELS ON 8 SEPTEMBER 2004	47

1. Introduction

This report presents the results of the third phase of the study of the e-learning suppliers market in Europe. The objective of the third phase is to analyse the future development of the e-learning suppliers market, identifying key factors affecting where and how the future European market will evolve, draw up possible scenarios for how it may evolve given the evolution of certain factors, and have experts and suppliers validate these.

The results detail four possible scenarios for 2010, the results of a web-survey asking 143 e-learning operators and commentators to give their opinion of the possible future developments and the results of the validation workshop in Brussels.

1.1. *Introduction to future scenarios*

The report describes four different scenarios for the future development and state of the European e-learning sector. A scenario describes a plausible hypothesis about the future and is one of the tools used in foresight exercises, for policy analyses and policy formulation, and for strategy processes in private companies.

Building scenarios that describe the world six years from now is necessary if we are to appropriately adapt current best practice so as to arrive at a more robust, future-oriented best practice should a particular future occur. Scenario building can also point to ideas and methods for operationalising insights generated in the case studies and the market study. Consequently, scenario analysis should be regarded as a tool for insight and a catalyst for strategic discussions, but not as an end in itself.

The four alternative scenarios presented here represent realistic, internally consistent, and plausible pictures of alternative futures:

- Scenario 1: “Glory days”,
- Scenario 2: “Waiting for better times”,
- Scenario 3: “The missed opportunities”,
- Scenario 4: ”Private initiative in the driving seat”

1.2. *Methodology*

In principle, a scenario is a tool that used for policy analysis and strategic analysis to describe a possible future. As such, a scenario has to fulfil the following criteria:

- It should be plausible, but does not have to be the most probable.
- It should be internally consistent in order to be plausible and in order to enable a coherent discussion.
- It should not describe the developments that led to the described picture of the future. Instead, participants are asked to project backwards from the posited future to better understand how that future might arise.

The scenario building has been undertaken as a 2-stage process:

Stage 1 was devoted to developing exploratory (not normative) scenarios. These are partially based on existing work, but are mainly based on desk research by the scenario team without direct involvement of external industry experts. Existing work in this area has been examined and particular attention was paid to the e-Learn 2004 world summit scenarios and “The e-learning industry and market in Europe” (Deliverable 1, version 1) produced in the context of this project. At this stage, the main macro drivers¹ and important dimensions of change were examined in order to determine the most important elements of the future. Once these drivers and dimensions were identified, they were “fleshed out” into plausible and concrete scenarios. The decision to concentrate on a set of four such scenarios was deliberate.

Stage 2 examined the plausible implications that the macro drivers may have on companies and on those issues that companies must address in the future. This part will be done partly by desk research and partly drawing on the strategic discussions that scenario experts will have with industry representatives.

1.2.1. Construction of the scenarios

The construction of “external scenarios” builds on a conceptual framework designed to capture changes in the external environment of service provision by means of five categories of *drivers and trends*:

- socio-cultural
- economic
- political
- technical
- ecological

The scenario team undertook a collation of opinions on major trends and drivers of socio-cultural, economic, political, technical, and ecological changes over the next ten years in relation to factors that will have significant impact on the e-learning industry. These trends and drivers were consolidated and assessed within the team according to four *criteria*:

- importance (i.e. importance for e-service delivery: low, medium, high)
- certainty (i.e. likelihood of occurrence: low, medium, high)
- controllability (i.e. ability to manage: low, medium, high)
- significance (global and European; yes/no)

The assessment was used to evaluate how the consolidated drivers may be combined in the best way to develop scenarios that are thought provoking, consistent, and plausible.

In constructing the scenarios, we have reviewed:

- The Edinburgh e-learning Scenarios (February 2004) www.elearninternational.co.uk

¹ They are labelled “macro” drivers because they focus on the drivers that are hard for any single actor to influence.

- Literature relating to e-learning and the future
- Trends from the case studies and desk research
- A web based survey of future trends in the e-learning industry (see last section)
- A workshop involving e-learning actors to validate dimensions
- An analysis of the chosen scenario dimensions

1.2.2. Identifying the implications in the scenarios

Analysis of the scenario's industry-specific effects on companies were categorised under the following themes:

1. Skills and education

This theme deals with the issues and challenges related to skills and education for industry in general and with the use of skills and education in e-learning.

2. Work organisation

This theme deals with the organisation of work in e-learning companies. Issues are related to internal enterprise organisation and to the distribution of work throughout the value chain.

3. Business strategies

This theme deals with the generic business strategies that companies follow in the scenarios, describing issues such as brand management and strategic alliances.

4. Innovation strategies

This theme deals with the various innovation strategies that companies pursue and, on a more general level, with the role and importance of innovation seen from a European perspective.

1.2.3. Validation seminar

Both scenarios and implications have been based on desk research. Consequently, in order to ensure "closeness" and "grounding" of both they were presented at a workshop with industry representatives in September 2004. The industry representatives were asked to identify potential flaws or inconsistencies in the scenarios, but they were not asked to identify the most plausible or desirable of the scenarios. In relation to the implications, the participants were asked to describe the most likely strategies that their companies would pursue in the four scenarios, and this input was used to validate and develop the implication descriptions made so far.

1.2.4. Construction of the scenarios

The six dimensions identified as the basis for scenario building can be characterised as follows:

1st dimension: technology

This dimension entails drivers relating to the development of infrastructure, hardware, and software on specific e-learning technologies as well as more general ICT. The variation of the theme is Integration vs. Fragmentation and is more specifically related to e-learning technologies. On the one hand, e-learning technologies - and more generally ICT - may be integrated in the sense that middleware applications and open standards allow for significant and easy integration of software and data. This will pave the way for very sophisticated e-learning solutions that will be made available at very affordable prices. On the other hand,

ICT may be very fragmented in the sense that we will see very few initiatives related to open standards and source and problems integration of different kinds of infrastructure, software, and hardware. The consequence of this is expected to be that strategic and business oriented integration of different professional areas and technologies will only be achievable for very large private companies thereby making strategic and "holistic" use of e-learning something that only elite companies and individuals will experience.

2nd dimension: economic conditions

This dimension entails macro drivers relating to the development of the global economic conditions. The variation of the theme is simply "good" and "bad" and these values are interpreted from a macro economic viewpoint. "Good" means that globalisation will continue and that nations, companies, and citizens are able to adjust to the implications of this development thereby securing long-term benefits of a global distribution of most value chains in most industries. "Bad" means that there is a global recession and that national states and companies are beginning to think and act defensively thereby reducing productivity and GDP growth on a global level.

3rd dimension: society

This dimension refers to societal issues such as culture, the development of the educational system, social identity, life style trends etc. The variation of this theme can be either fragmentation or cohesion. In a fragmented society, the role of the state is often weak and individuals are looking for meaning and identity in well-defined sub-cultures. In a society with cohesion, the role of government and the national state is very important in most individuals' lives.

4th dimension: industry structure

This dimension relates to the industry structure and competitive situation of the e-learning sector. The variation of the theme is homogenous vs. heterogeneous. In a homogenous structure, few companies dominate the market through different sources of power and dominating strategies. New initiatives rarely appear and are often incremental initiatives build on existing technologies owned by the dominating players. In a heterogeneous structure, there may be dominating companies but they do not "rule" the sector. New entrants often enter the market and smaller and medium-size companies continually reinvent e-learning through use of new technologies and didactic concepts.

5th dimension: work development

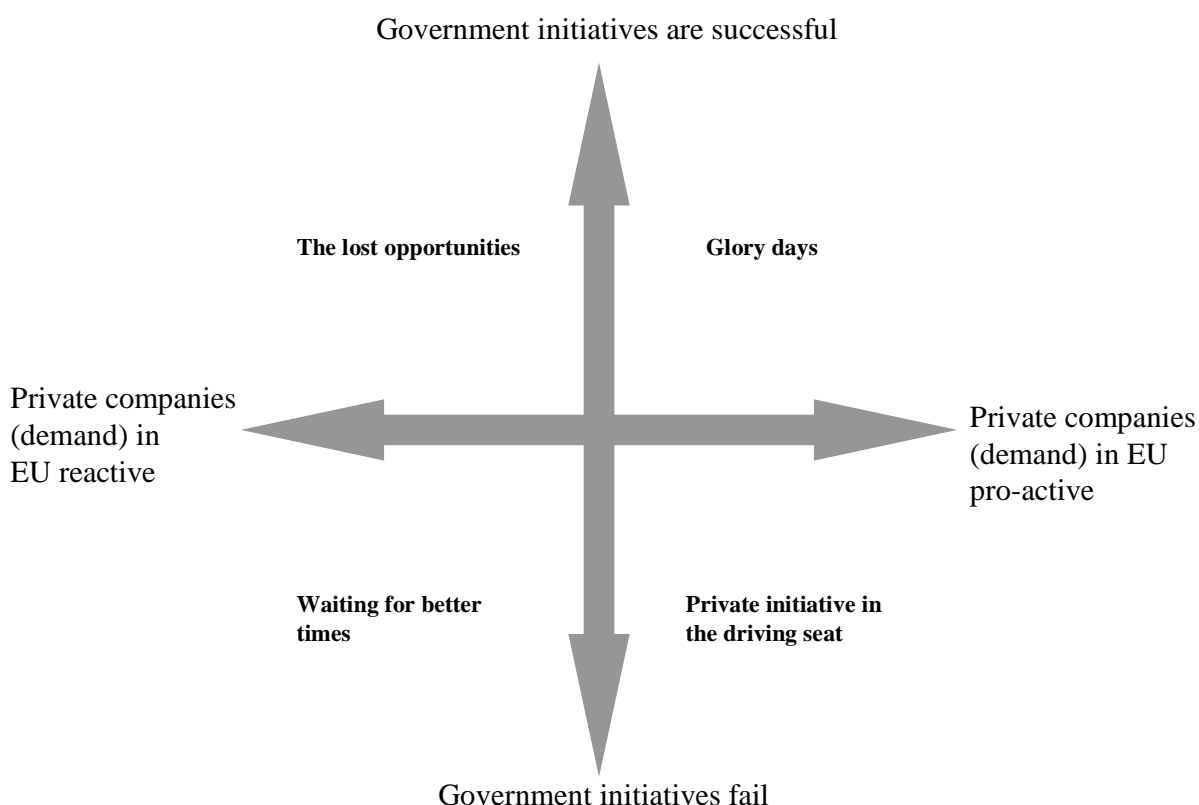
This dimension relates to the strategic position of the companies who are expected to be using e-learning. The variation of the theme is long-term thinking vs. short-term thinking. In a long-term perspective, companies in EU are aware that their opportunities for survival lie in long-term investment in its human resources and in R&D. This is expected to create a general demand for educational and training activities, which will also be reflected in relation to e-learning. In a short-term thinking, most companies focus on short-term margins and productivity gains and thereby neglect to make the long-term investments in their companies. This is expected to have a negative effect on the demand for e-learning.

6th dimension: labour market

This dimension relates to the development of the labour markets and its relation to e-learning. The variation of the theme is flexibility vs. rigidity. In flexible labour markets, nations, companies, and citizens are able to react to the massive challenges posed by globalisation.

Educational activities and other incentives ensure that the workforce may adjust itself to the needs of the companies and vice versa. This is expected to create demand for e-learning products. In a rigid labour market educational and labour market incentives and legislation has not been geared to the challenges of globalisation. The implication of globalisation is therefore massive unemployment and serious long-term and short-term threats towards nations GDP's and employment figures.

The four scenarios and their specific effects on the industry are:



Scenario 1: “Glory days”

This is a scenario where e-learning has had its breakthrough. There is a comprehensive demand from all sides, from enterprises, teachers, students, and citizens. Providers are able to fulfil the needs of customers and technological development has led to satisfying price levels.

The dimensions of this scenario are: Technology = Integrated, Economy = Good, Social = Cohesion, Industrial = Heterogeneous, Work development = Long-term, and Labour market = Flexibility working.

Scenario 2: “Waiting for better times”

This is the worst-case scenario for the e-learning sector. Demand for e-learning is very limited due to lack of accessibility to broadband, lack of political initiatives regarding lifelong

learning in combination with economic recession and high unemployment rates. Moreover, the markets are dominated by a few global players in the sectors of computers and telecommunication, and they have no particular interests in e-learning products.

The dimensions of this scenario are: Technology = Fragmented, Economy = Bad, Social = Fragmented, Industrial = Homogeneous, Work development = Short term, and Labour market = Flexibility not working.

Scenario 3: “Missed opportunities”

This is a scenario where the general societal development is considered good and progressive, but e-learning does not play a dominant role in this positive development. E-learning companies are finding it hard to penetrate several market segments where potential customers simply do not see e-learning as something of strategic importance for them. In this sense, it is the scenario of the missed opportunities.

The dimensions of this scenario are: Technology = Fragmented, Economy = Good, Social = Fragmented, Industrial = Homogenous, Work development = Short term, and Labour market = Flexibility working.

Scenario 4: “Private initiative in the driving seat”

This is a scenario where the economy is good, and technological development is excellent. Public policies have not sufficiently addressed reforms of labour markets and educational systems. This has put pressure on individuals and companies to adapt to new conditions. Knowledge intensive companies themselves are investing heavily in competence development as part of an economic and innovation agenda. In this sense, the companies have the initiative. We therefore see an increasing polarisation in life quality and general development opportunities between those who have a job and those who do not.

The dimensions of this scenario are: Technology = Integrated, Economy = Good, Social = Cohesion, Industrial = Heterogeneous, Work development = Long-term, and Labour market = Flexibility not working.

2. Scenario 1: glory days

Scenario 1 is characterised by:

- Technology integration
- Economic conditions are good
- Society is characterised by cohesion
- Industrial structure is heterogeneous
- Workplace development is characterised by long-term strategic thinking
- The labour market is flexible and well functioning

This is a scenario where e-learning has had its breakthrough. There is comprehensive demand from all sides, from enterprises, teachers, students, and citizens. Providers are able to fulfil the needs of customers and technological development has led to satisfying price levels.

2.1. Technology integration

Digital literacy is about to spread through society, especially among younger persons due to the high priority of the use of ICT in compulsory schools over the past years both nationally and at European level. The significance of social inheritance, which used to mean a lot for children's access to and use of computers, has been compensated for by the role of the schools in providing IT facilities.

The fierce competition in the telecommunications industry provides the consumers with very good prices for broadband access to the Internet. On average, about 80 percent of the European population has access to broadband. In general, the global economy has increased competition and with regard to technological development, this means that vendors are very keen on product and service/concept developments. Ambient computer systems and customised software are in strong demand among customers. E-learning is an important tool in that development. E.g. in the health care industry where rehabilitation of disabled people increasingly takes place in their own homes thanks to customised e-learning programs, or companies that use e-learning as an integrated part of the workflow. Simulations introduce new employees to their new workplaces or help employees in general to manage technical interruptions in the production flow.

2.2. Economic conditions are good

The economic conditions are very good in Europe. After the economic recession that followed the war and crisis in Iraq, the situation has now been reasonably stable for some years. Although the Middle East in many ways is still regarded as a smouldering bomb, the delivery of and price of oil is relatively stable, securing the basis for growth in the world economy.

International trade increases competition in home markets. On the other hand, it also provides access to foreign markets. Enterprises and consumers have had faith in these developments and have spent and invested money, opening up new business opportunities and job creation. The fear of massive job losses that were on the political agenda a few years earlier is no longer considered a problem. Some jobs go others come. Especially the areas of management, brand marketing, product innovation, learning and leisure, and within advanced production, technology related to, e.g., developments in micro-tech and new materials create new jobs.

The e-learning sector is among the business sectors with the highest growth rates. The technological development in combination with low prices plays a big role in this development. However, the famous British actor – what was his name again? – said in an interview that his successful rehabilitation after his car accident was based on highly interactive e-learning between him and the doctors probably plays a role too. Moreover, the companies announcing that e-learning is among the key factors in securing lean production, and thereby business success, probably play a role as well. Alternatively, maybe it is simply a matter of businesses and institutions being ready for e-learning.

2.3. Society - characterised by cohesion

2.3.1. Life style

The European nations share a consensus about material well-being. It is all about making money in order to consume. There is a lot of focus on lifelong learning and job career development in order to fulfil the dreams of your life.

The growth is particularly taking place in the urban areas. The phasing out of the structural funds in the European Community increased the tendencies of people moving from the countryside to the big cities. Agriculture has now become even more professional and is consolidated around few big players.

Urban growth leads to higher house prices. It takes two good incomes to buy a house near the cities. A greater share of women enters the labour market, not only in the Scandinavian countries but also in the rest of Europe.

All in all the need for flexibility is therefore extensive both in private homes and in business. Time is very valuable and consumers see flexible organisation of work, family life, and education and learning as being part of the solution. Logistics and time management is a big issue.

For example, the continuous focus on career building, including improvement of qualifications and competencies, has led to a more flexible organisation of “lifelong learning”. The most important tool is e-learning, much more advanced than the applications previously seen. This can be applied to:

- employees doing their further education and adding qualifications by e-learning wherever they are whenever they want,
- companies using e-learning to introduce new employees to the work flow,
- companies using e-learning to market new brands to customers and retail end, and
- pupils and students supplementing their education with courses from other learning institutions.

Nobody talks about e-learning anymore. What used to be called e-learning is embedded in all areas of family and working life. When cooking you follow the instructions given by your computerised refrigerator, when gardening you bring your mobile phone and follow the instructions of how to cut the roses. When you want your children to be familiar with geometry you show them simulations of what might happen if their calculations of where a felled tree will fall, are wrong etc. Intelligent embedded software applications and pervasive computing are driving this development.

2.3.2. Educational system

Compulsory school

Digital infrastructure and use of ICT in the populations has been a high priority for most of the European governments and for the European Community for the past five years. There have been heavy investments in ICT in the compulsory schooling system.

An educated population is seen as one of the most important competition parameters in the global economy. The aim is therefore to get the biggest possible part of a younger generation into higher education. To achieve this, children in compulsory schools are tested continuously in order to give them the help required as soon as the need occurs.

To ensure that children and young people have a good experience in the school systems – despite the continuous testing – research programmes regarding multiple intelligences and how to teach children with, e.g., linguistic or visual intelligence and programs to help children who have difficulties during their schooling, have been initiated. Especially customised software applications have turned out to be very successful in helping visually and holistically intelligent children through lessons such as mathematics and physics that are based on a mathematical/logistical intelligence.

Another improvement is the digital and on-line dialogue integrated between schools and parents both at homes and at workplaces. For example, parents can find a number of tailor-made applications to support their children in homework activities and – in dialogue with the teachers – to follow the progress of their children. The teachers are generally very active in the development and sharing of content taking place at common educational platforms where up and downloading is free, and where part of it is open source content development. This development was very slow around 2004/05, but collaborative efforts among teachers is experiencing a boom in quality and therefore also in demand.

Integrated e-learning applications for the schools market are emerging introduced by specialists who combine visualisation techniques with brain research acting as subcontracted suppliers in the compulsory schools market.

Training and VET

Like the rest of the educational system, vocational education is highly modularised and flexibly organised in order to fulfil the requirements for flexibility in the labour markets. One way to secure flexibility – and solving the classical financial problems of schools concerning investments in new technology – is the use of virtual reality classrooms. By simulating the technology used in companies, the students receive the necessary teaching and facilitation of learning. The applications are easily adapted dependent on what kind of vocational education and qualification level of the students that are in focus.

Furthermore, the interactivity between schools and companies has evolved taking advantage of the possibilities that come with collaborative learning platforms. Teachers and HRM managers exchange views and ideas, up and download instruction papers, follow the student's homework and progress, etc. There is awareness from both sides of what actually happens in the schools and the companies respectively, ensuring the right balance between theory and practice.

The vocational education and training system also plays a dominant role in securing a flexible and well functioning labour market. A highly qualified labour force and fast and flexible job circulation have high political priority. People are needed in the labour force, so whenever someone loses contact with the labour market, they are required to re-enter as soon as possible. Labour market programmes are initiated to ensure rehabilitation of disabled people and people with long-term illnesses, as well as re-schooling of workers who have been made redundant. These programmes are financed by the state, companies, and workers. Part of the programmes includes flexible e-learning opportunities in order to help people who have difficulties in being mobile or wanting to learn outside “opening hours”.

At a European level, the question of transferability of skills has been solved leading the road to increased cooperation between the educational institutions. Just like students in higher

education, vocational trainees supplement their education and training with courses from other European institutions. Especially the developments within automatic language recognition and translations combined with the developments within virtual reality support VET across borders.

Higher education

Higher educational institutions are similar to VET flexibly organised and highly modularised. The competition among European universities has increased due to the improved transferability of credits and the students' legislative right to transfer to other universities once they have passed bachelor level. With e-learning applications, problems regarding capacity and teaching resources have diminished.

A few years ago, the first truly virtual universities saw the light of the day. They primarily target continuous education and training, often in collaboration with publishers of digital content, being both private players and some of the big universities in particular areas of excellence. One of the interesting developments regards user-friendly digital devices for different segments in the labour force such as content production for mobile technologies.

2.4. Workplace development – long-term strategic thinking

The boom in the world economy gave companies' confidence in long-term strategic thinking concerning all aspects of the company, product development, human resource management, investments in new technology, etc. As mentioned above, international trade on the one hand increased home market competition, but on the other hand, it gave European companies access to foreign markets. Off-shoring production to reduce production costs is on the agenda, and so is strategic focus on both R&D and user driven innovation.

ICT plays a central role in this aspect and has driven ambient computing in Europe to a very advanced market stage after years of slow development compared to the USA. The best way to ensure on-going innovation is through embedded ICT enabled continuous learning by employees and supported by innovative work organisation practices.

2.4.1. Strategies and actions in traditional industries

Competition on price is still a dominating strategy in traditional industries often achieved by off-shoring those parts of the production where labour is the predominant element of the total costs. At the same time, companies are very aware of the importance of product development and human resource management. There seems to be an acknowledgement of the value of bottom-up ideas to improvements and new developments. An important tool is continuous education both within the organisation and in co-operation with close partners in the value chain.

2.4.2. Strategies and actions in knowledge intensive companies

Knowledge intensive companies place more focus on brand management and less on price competition than the traditional industries. Besides that, the two types of companies are very alike concerning long-term strategic thinking.

2.5. *E-learning industry structure - heterogeneous*

2.5.1. Distribution of power and influence in the value chain

Forecasts around 2004/5 predicted that a handful of enterprises would rule the world of e-learning. Instead, the picture is a lot more multifaceted. Of course, there are some big dominant players, but there is also an up and coming group of small, highly innovative, and specialised vendors who often have advantages of their intimate knowledge about their home markets and customers.

A third dominant player is the educational systems. The political attention from both national and European level on the use of information and communication technology and hereby e-learning has opened up opportunities for networks of educational institutions in collaboration with teachers to improve quality and content of curricula. This has also led to new forms of managerial and administrative infrastructure for learning like the above example where parents can find applications supporting children in their school work.

2.5.2. New entrants

It seems that there is always room for yet a new supplier in the e-learning sector. The tremendous focus from all sides on flexibility and education in combination with a demand for customising applications ensure a continual development of new niches. For example, a number of smaller players have entered the supply market setting up systems and maintaining these within integrated educational infrastructures. They have the advantage in that they hold specific local knowledge of educational conditions and contexts.

2.5.3. Dominating strategies

Optimism characterises the e-learning sector. Regardless of what kind of customers the suppliers focus on, awareness of individual and specific needs is an integrated part of the organisational set-up, leading to flexibility and lean production in the e-learning sector. Investments in trend analysis and forecasts and tight attention to developments in associated sectors such as leisure, entertainment, education, health care, etc., are important parts of the ongoing product development and fulfilment of customers needs.

2.6. *The labour market – flexible and well functioning*

The labour market functions well. Job circulation is high. Political initiatives and a general awareness of geographical and professional mobility ensure that vacancies are filled and that unemployment is of no political interest.

2.6.1. Government initiatives related to the labour market

Political initiatives taken both at the European level as well as at national levels concerning labour market flexibility and mobility ensure that unemployment levels are most often short-term and thus of no major political concern.

The educational sector - both public and private – is very internationalised, flexibly organised with programmes and courses built up in modules, with inter-connected infrastructure between different educational institutions and geographical contexts, so people can learn where, how and when they want from who they want both for work and for general purposes. In this context, the Integrated Information Society, labour market, and educational policies have played a major role.

2.6.2. Social partners initiatives related to Labour market

The earlier fears of increased competition in industry followed by job losses meant that the employer and employee organisations found each other in agreement on better and higher education to more people. In several countries, part of the wage packet is now given to a special education account – just like pensions – financing further education within the labour market.

2.7. *Implications for the e-learning market/market perspective at a glance*

2.7.1. Market diagnostic

The market conditions for the e-learning sector are perfect. The digital literacy in society is profound due to investments in ICT in primary school, the need for flexibility in private life, in the educational systems and on the labour market and not least due to the massive focus on lifelong learning.

2.7.2. Nature of demand

E-learning fulfils the needs for on-going education and learning and flexibility. Demand for customised software applications is seen from the society as a whole, from the educational sector, from both companies and employees and from individuals. Glory days have finally come to the e-learning sector.

3. Scenario 2: waiting for better times

Scenario two is characterised by:

- Technology fragmentation
- Economic conditions are bad
- Society is characterised by fragmentation
- Industrial structure is homogeneous
- Workplace development is characterised by short-term strategic thinking
- The labour market is non-flexible and functions poorly

This is the worst-case scenario for the e-learning sector. Demand for e-learning is very limited due to lack of accessibility to broadband, lack of political initiatives regarding lifelong learning in combination with economic recession and high unemployment rates. A few global players in the IT and telecommunication sector dominate the markets. They show no particular interests in developing new e-learning products.

3.1. *Technology – fragmented*

Information- and communication technologies are developing at a slower speed than was seen five years ago. The reasons are underdeveloped infrastructures in certain regions and problems regarding accessibility and interoperability in several application areas.

Broadband accessibility varies a lot both within national populations and across Europe. In many countries, investments in broadband have been decentralised to the regions. Among several development priorities, they have had to decide whether they want to invest in broadband and with what type of expected benefits to the regions. Often the regions have

handed over the decision to the private initiative. In less densely populated regions, the business case has often not been evident for the private investors. Thus, it is particularly in the dense urbanised areas that broadband is accessible.

Another factor that has slowed down development is that the biggest and most dominating players within the IT and telecommunication sectors have shown no or little interest in developing fully integrated business application systems. The biggest companies compete on prices and basic product development, not on innovation and tailored solutions for the customers. In that context a fragmented and small market in Europe is of little interest compared to other global markets.

3.2. *Economic conditions – bad*

It has been a long period of economic recession. Terrorism strikes occasionally with big effects on economic and social stability.

The European Community has not been able to harvest the expected synergies from the enlargement of the EU from 15 to 25 Member States. The only real point of agreement and collaboration among the Member States are on security matters. When it comes to economic priorities, it always ends up being a discussion on how to “cut the cake”. The new Member States had expected a more prosperous future, and had hoped that the Structural Funds would mostly benefit the new – and most under-developed Member States and regions, especially regarding basic infrastructure and agricultural and industrial reforms. However, the old Member States only see the new ones as being an economic burden. This is also the main reason why the Lisbon goals were never achieved.

The European project has become fragmented with member states developing at different speeds. The former strong economies among the old Member States are still the strongest, and the weakest are still the weakest. This is also the situation among the new Member States. This makes it difficult to launch and operate any cohesive initiatives regarding economic development and innovation.

3.3. *Society – fragmented*

3.3.1. Life style

Most people mind their own affairs. Individualism and family values are in focus. Economic recession, high rates of unemployment, fear of terrorism, political uncertainty, and lack of policy actions in central areas of concern – at the EU level too – mean that people do not have any concerns for a wider community. The gap between rich and poor is widening and racism is growing.

People spend their money on basic issues, or in other words on “nest building”. The housing sector, the “handy man” markets and furniture and decoration sectors are among the few that make a profit.

The European project has not resulted in the unification of Europe that some of the architects had hoped. Instead, it is a Europe at a different pace, marked by inner conflicts and differences economically, socially and culturally. National and regional protectionism is growing. Europe is falling apart from within.

3.3.2. Educational system

Compulsory schooling

Previous initiatives concerning the implementation and use of information and communications technology in compulsory schools for a while lead to growing digital literacy among teachers and pupils. The goal was that all children and young people – no matter their socio-economic background – should know how to use computers and the Internet when doing their research and essay writing. Unfortunately, governments did not follow their good intentions up with economic resources to enable the schools to buy computer equipment.

Many state schools invested in the years 2004/05 in educational platforms, but today they have to admit that the money spent, was money lost. Lack of resources to populate, maintain, and develop the platforms is the main reason. Only few schools with very enthusiastic teachers, who were so enthusiastic about the project that they spent their own spare time on it, have achieved good experiences. Unfortunately, those good practices are not disseminated to other schools due to the fragmented digital infrastructure, lack of political initiatives and absence of co-ordination between schools.

The fragmented societies where the gap between rich and poor is widening also have consequences for the relationship between state and private compulsory schools. People who can afford it have their children enter private schools because these schools are able to maintain some level of standard as opposed to the state schools that mostly are very worn down. Many of the private schools can offer online tools and services to help to the children with their homework, including e-learning applications that parents can buy.

VET

Not much has changed in the educational systems for the past 5 or 6 years. Unemployment rates have led to young people preferring to stay in the educational systems as long as they can. A larger share of the youth cohorts therefore complete an upper secondary degree and drop out rates from upper secondary education have seen a decrease.

Nevertheless, many schools have economic problems and therefore try to attract young people from especially Eastern Europe but also countries like China. A significant part of content development is concerned with language programs and programs to secure integration of the many culturally differences between students from different countries. Another part of the development focuses on the labour market, where some government initiatives are introduced to help people who have been made redundant complete training designed to make them job-ready again. However, in order to cut costs in an expanding educational sector most governments have changed the financing schemes for higher and continuing education, so that individuals and companies respectively need to pay a much higher share of the costs towards education and training provision – pretty much like in the USA. In a period of economic recession that means that demand is very limited. Neither companies nor people themselves have much money left to invest in training.

In general there is very little contact and co-operation between schools and companies.

Higher education

Half a decade ago during the period of economic growth, many European governments either decided to freeze taxes or even gave minor tax cuts. Soon after, the economic recession hit the western world. Currently, only few countries can therefore afford investments in education beyond upper secondary levels. This development increases the polarisation in society. People who have, can have more. People who do not, have less. With private fees increasingly financing higher education, mostly rich people can afford this luxury for their teenagers, although some lower ranked universities are seeking to provide discounted education for the poorer segment of the population.

Universities also help fulfilling the dreams of lifelong learning for the wealthy and highly educated elite. Competition on this specialised market for lifelong learning is therefore very tight and has become global with universities trying to appeal to these critical consumers with different kinds of e-learning products.

In general, the development of content or new pedagogical methods has primarily been a result of private and/or commercial initiatives. However, as the market for digital content has diminished due to lack of broadband developments, private investments from publishers and media producers have also rapidly diminished.

3.4. Work development – short-term thinking

3.4.1. Strategies and actions in traditional industries

Traditional industry has diminished to a level one could never have imagined. This is the result of a decade of massive off-shoring of production and associated services followed by an immense loss of especially low-skilled jobs. Moreover, high-skilled R&D jobs have been relocated as the markets grew in the Far East. In this process, companies lost valuable tacit knowledge and have therefore not had the competencies in-house to innovate and change direction. With little money to invest in any long-term changes, many companies are driven out of business, or are forced to survive on a day-to-day basis through cost cutting and efficiency measures.

This means that companies have little capital to invest in training of their employees. Often they do not even have any kind of strategic vision regarding the type of competencies that may improve the business performance. Some employees finance training themselves in the hope that it can help them maintain their jobs. Mostly they use libraries, and what international applications they can find on the Internet for free or for little money, as the private economy is also suffering.

3.4.2. Strategies and actions in knowledge intensive companies

In knowledge intensive companies in sectors such as nanotechnology, materials or biomedicine, strategic thinking is more long-term, especially concerning innovation strategies and product development. Development of human resources is of some priority, especially where the R&D functions have not been outsourced. Since these companies are highly dependent on the North American markets and the markets in South East Asia in particular, they tend to use education and training offers from the USA – when they do invest – to be certain that the courses they select represent state-of-the-art in technology.

3.5. The labour market – flexibility is not working

All over Europe and particularly in Eastern Europe, unemployment rates are high. Especially industry experiences high unemployment rates due to economic recession and off-shoring of production. Job losses mainly affect low-skilled jobs in industry. However, also high-skilled jobs, such as programming and research and development, have moved eastward to be close to the new big markets. At the same time, there are skills miss-matches in very specific areas.

3.5.1. Government initiatives related to the labour market

In some European countries – especially in the Scandinavian Member States – there is a tradition of co-operation among companies and local authorities and educational institutions in order to help employees who have been made redundant into new job careers. However, this task has grown in complexity because job creation does not follow speed with the actual job losses. In European Member States without a tradition for active labour market policies, unemployment rates are even higher. The EU has not succeeded in establishing common initiatives to solve present – and prevent future – unemployment. Though new companies are created as a result of entrepreneurial programmes, they typically remain micro-companies serving very specific niche areas and with low employment generation.

Structural problems in the labour market have created a more fragmented society with social groups of “the new poor”. Due to economic recession in most countries there are no public means to invest seriously in achieving flexible and active labour markets. Government initiatives related to the labour markets are therefore focused on “minimum damage control” with focus on those who are most “labour-market ready”, meaning those who are regarded most easy to get back in employment or to start a new company!

3.5.2. Social partner initiatives related to the labour market

Employees’ organisations are very keen on working for a better functioning labour market. The economic recession, however, makes it difficult for the organisations to find new areas of growth. The employees’ organisations co-operate with social departments within the regional authorities in order to hinder social de-route caused by unemployment.

3.6. E-learning industrial structure - homogenous

3.6.1. Distribution of power and influence in the value chain

E-learning business is dominated by a handful of global IT and telecommunication companies. None of them focus solely on e-learning, but see it as one product among others in their portfolio of products and services. In comparison with market possibilities in large English speaking markets, such as Northern America and India, in India in partnership with local companies that have developed a strong position following years of off-shoring – Europe is of little interest. The reasons are market and infrastructure fragmentation and cultural and language barriers for developers of digital content. In other words, when a global player decides to enter one of the European markets of a certain size, e.g. the markets of France, Spain, and Germany and some of the countries in the Baltic area, they are dependent on doing it in partnership with local companies in order to overcome entry barriers.

3.6.2. New entrants

On the national scenes, some publishers have niche products to national educational systems, but they are not big or strong enough to cross borders or develop in any larger scale.

New – and small – vendors who enter the stage almost all follow one of two possible paths. They go bankrupt or, if they are commercially viable, they are taken over by one of the big players. Interesting developments do take place in Asia and the Far East, where the global players are not as dominant as they are in the western parts of the world. After years of locating the off-shored production from the US and the European countries in Asia and the Far East, these countries are now capable of standing on their own feet or entering into strategic alliances with the big players in IT and telecommunication. New innovative products “made in China” such as interactive programs and games for playing and learning – “Edutainment” – are seen on the European markets, but mainly in pure technical fields, where cultural barriers are not so important

3.6.3. Dominating strategies

The big players are strong, and their main goal is to grow even bigger. The business strategies used are to dump prices now and then in order to destroy smaller competitors, or to buy up the most interesting ones among the new market entrants. Only when the big players want to enter a new market where their market share is small, due to e.g. language barriers, do they co-operate with local suppliers. Labour-intensive production is located where the lowest costs on qualified labour can be found.

Smaller suppliers can survive in niches in local markets, where they have advantages of being part of the culture or the language spoken, or due to sector specific knowledge such as for example basic schooling. It is a struggle for smaller suppliers to survive in the market, and often the choice will be between “get eaten or die”.

3.7. *Market perspective at a glance*

3.7.1. Market diagnostic

The market conditions for e-learning suppliers are difficult in this scenario. E-learning is almost none existing. The market for IT and telecommunications is dominated by a few global players to whom e-learning is just one product among others in their product portfolio. They compete on price and market shares for the large new English-speaking markets where the infrastructure is in place and demand for education and training is enormous at all levels. Some smaller suppliers survive in niches in the local markets. However, for the majority of small vendors the option is “better get eaten than die”.

3.7.2. Nature of demand

Lack of accessibility to broadband, lack of policy initiatives and actions regarding lifelong learning, economic recession, and high unemployment rates mean that demand for e-learning is very limited. The best thing to do for the moment seems to be wait for better times or to try and convince public opinion and policy makers that a large investment in re-educating the unemployed through large scale e-learning could be one of the roads to an economic turn-around.

4. Scenario 3: the missed opportunities

Scenario 3 is characterised by:

- Technology: Fragmented
- Economy: Good
- Social: Fragmented
- Industrial: Homogenous
- Work development: Short
- Labour: Flexibility working

This is a scenario where the general societal development is considered good and progressive, but e-learning does not play a dominant role in this positive development. E-learning companies are finding it hard to penetrate several market segments where potential customers simply do not see e-learning as something of strategic importance for them. In this sense, it is the scenario of the missed opportunities.

4.1. *Technology - fragmented*

All-purpose ICTs are well developed and used in many areas. There is a good fixed and mobile infrastructure in most countries, and we see very advanced uses in many different areas and industries. There is a lot of development within the area of ambient computing and personal agents, but these developments are predominantly driven by the media and entertainment industry and less by content providers in the learning business. One of the key reasons for this is that there are very few applications that can truly integrate the different needs and systems requirements in an organisational context, and no “de-facto” standards have established themselves. Consequently, for learning purposes e-learning and its integration in other HRM and ERP systems is very far from “Plug and play”.

4.2. *Economy - good*

Globalisation has continued at its rapid pace involving more and more industries and jobs in Europe. Seen from a macro-economic perspective this development is to the benefit of all actors involved. Whereas traditional companies have focused on cost-cutting and efficiency strategies, more-knowledge intensive companies focus on core competencies where a flexible skilled workforce plays a role. Consequently, productivity is rising and most European countries are able to deal with the challenges that this development creates for the labour market and “welfare state” at least for the time being.

4.3. *Society - fragmented*

4.3.1. Life style

The trends of individualisation and fragmentation of the society has continued throughout the century. Global trends and cultures still play an important role in the fragmentation of national identity, but in many countries new movements such as “simple living” new-life-communities are also contributing to differentiation of heterogeneity of Europe.

4.3.2. Education

Investments in the formalised educational system in both general education and adult education play an important role in government priorities and in the minds of the European citizens.

Compulsory schooling

Investment in compulsory school systems has been increased in many countries because of several large-scale measurement initiatives within an EU context as well as an OECD context. Significant parts of these investments are spent on facilitating the integration of ICT in the planning and execution of teaching. Some of these initiatives can be characterised as successes, but they are rarely shared with other institutions. Therefore, the development and implementation of e-learning in compulsory schooling is rather fragmented although the resources are available. Another area in compulsory schooling that receives a lot of attention is new ways of learning. Several interesting research projects are conducted, and new technologies are being developed, but the schools have problems with implementing the results of such initiatives.

Examples of such an initiative are all purpose administration systems that can be tailored to educational purposes for managerial purposes and competence databases as a particular software area integrated with e-learning application, so that students get the right “dosage” with the right learning style at the right time

VET

Funding is also flowing towards the VET systems and higher educational institutions, producing positive effects on the use of ICT and e-learning. The general trend in the educational system is that much of the content is developed internally and significant parts of the platforms are also configured internally based on low cost - open source technology - which can integrate pedagogical, administrative, and managerial purposes.

At a European level, several initiatives have dealt with the challenges relating to merit and certification of skills between countries, followed by the Bologna and Copenhagen process. Test and e-learning programmes have an important role to play in relation to these initiatives. These initiatives have led to a more flexible education sector and labour market seen from a European perspective.

However, unfortunately the dialogue between VET institutions and the private sector is very poor. Many private companies simply do not feel that they have the resources for this kind of interaction and many VET institutions feel that they are managing their institutions well without interference from the private sector.

Most of the initiatives related to e-learning are focused on simulations, visualisation and language and motion recognition software, but unfortunately the lifetime of such programmes is rather short as their content too often is not properly related to the demands for competencies in the private sector.

Higher education

The high degree of flexibility in the European labour market and the fact that educational merits are now transferable from nation to nation means that higher education has become

truly internationalised. Students may combine courses from several universities in different countries to design their ideal education. Naturally, e-learning plays an important role in this as many of the high profile universities see e-learning as an opportunity to reach an audience that would otherwise be difficult to reach. Another important area for the universities is the work place market, where an increasing number of well-educated employees are looking for more education to position themselves in the highly flexible and competitive labour market. For this customer segment, time and efficiency is extremely important, and therefore e-learning elements in their education are often appreciated.

4.3.3. Government initiatives related to e-learning

National governments and the EU have channelled a significant part of their funds for e-learning into the public educational sector. The aim of this strategy has been to develop a highly innovative, effective, and flexible educational system that may service individuals with very different backgrounds and needs. This means that innovation within e-learning (seen from a technological perspective) has not evolved that much – it is the actual use and development of content that has had the priority in most countries. Naturally, this means that universities and other large educational institutions have become important players on the European (and global) e-learning scene.

4.4. *Work development – short term*

4.4.1. Strategies and actions in traditional industries

The dominant share of “traditional” companies is engaged in a “race to the bottom” and/or are thinking extremely defensively and in a short-term thinking. The focus on profitability is leading companies to cut costs where they can. Apart from off-shoring, trimming assets reserved for R&D and education and training is among the most used initiatives. Although e-learning applications may be used to cut costs in the educational budget for very company specific training purposes only, the general effect of this focus on cost cutting is quite negative for the e-learning sector – especially in relation to the SME segment. From a company perspective, this works since the public structures in the labour market and educational systems have become very flexible thereby ensuring that any unforeseen demands for new skills and/or employees can be dealt with fast and effectively through public structures.

4.4.2. Strategies and actions in knowledge intensive companies

Companies in more knowledge intensive industries do invest in education and training with a long-term horizon, but e-learning is not their preferred method and many of the companies want to keep as much of the process as possible internally, as the knowledge is important for their competitive position. To the extent that these companies do cooperate with external partners, these are often universities where they may gain access to excellent R&D based knowledge. The dominant providers of e-learning to this segment therefore often have close affinity to one or more universities.

4.5. Labour market - flexible

4.5.1. Government initiatives related to the labour market

Governments and social partners have been very effective in improving legislation and creating initiatives that will motivate and educate citizens to find new jobs in other professional areas. In this sense, the labour market is working and this is the key to the continual economic success of most European countries and their ability to deal with the consequences of outsourcing. E-learning plays a role in some of these initiatives since it is a very effective way of developing general and broader technical and business skills. The dominant type of product is shelf-ware (standardised learning modules) that can easily and without any technical support be customised to different languages and contexts. Test and certifications are often integrated in these products and are important prerequisites for a flexible labour market.

4.5.2. Social partners initiatives related to Labour market

Social partners, sector and trade associations are playing an important role in “re-education” initiatives at a European level - and in initiatives to ensure close relationships between companies, employees, and educational institutions. Through these actions many social partners, sectors, and trade associations have become direct or indirect players in the e-learning market where they deliver content as well as platforms for e-learning.

4.6. E-learning industry structure – homogenous

4.6.1. Distribution of power and influence in the value chain

A few large companies providing full service solutions to national competence development systems relating to “re-education” dominate the e-learning industry. In addition, a number of small and specialised companies provide services to universities and their customers. A central element for both kinds of providers and for the market in general is their ability to perform Customer Relationship Management. In general, customer relationships are long-term and very solid, and this makes it very hard to capture market shares and even harder for new players to enter the market.

4.6.2. New entrants

Since e-learning is not a very lucrative market and entry barriers are high, only very strong companies try to enter the market. Some actors have entered the market with limited success via a focus on mobile learning, but the investments needed to capture market shares make such moves very difficult

4.6.3. Dominating strategies

Companies servicing the educational sector are focusing on platforms and Learning Content Management Systems that will enable schools to develop and manage their own content. Price, relevant customer references, and the level of market penetration of the software are among the most important issues when educational institutions invest, and consequently companies in this segment try to keep development costs and R&D as low as possible while they focus on marketing and relationship management instead. Some companies have successfully off-shored their development department and service department to India, thereby minimising costs related to “non-core-activities”.

Companies servicing traditional industry with training tests and learning are generally having a hard time. Most companies focus on large customers where the contracts are worth the sales efforts, while very few are successfully addressing the SME segments of traditional production industries. Few companies have accessed the SME market with reasonable success via different strategic alliances with relevant industry organisations.

Companies servicing the more knowledge-intensive companies are either universities or companies in close alliances with universities. Winning strategies are closely related to the quality of the specific value/production chain that the providers are part of and their ability to develop synergies and relations continuously between all actors in the chain. Customisation and the ability to develop new forms of learning technologies are very important in this segment and consequently most companies use a significant amount of resources on R&D. These investments must be balanced by a significant focus on customer relationships since the cost of “acquiring” customers is very high.

4.7. Market perspective at a glance

4.7.1. Market diagnostic

The e-learning market is moving at different speeds and most companies are having a hard time. There are two dominating strategies in the market:

- Service the “public” segment and do it effectively while cutting spending on production, costs, and R&D.
- Service the high-end private segment and do it by establishing very close relationships with universities (if you are not one yourself) and your key accounts. All services must be highly customised.

Due to bad times in the e-learning industry, we have seen a great deal of consolidation although functional specialisation is still the norm. There are very few new entrants since the market is not that lucrative.

4.7.2. Nature of demand

The bulk of the demand comes from educational institutions in youth education and is soft- and hardware oriented rather than content oriented. Demand from knowledge intensive companies is related to both content and software.

5. Scenario 4: private initiative in the driving seat

Scenario four is characterised by:

- Technology: Integrated
- Economy: Good
- Social: Cohesion
- Industrial: Heterogeneous
- Work development: Long

- Labour: Flexibility not working (limited success of public initiatives)

This is a scenario where the economy is good, and technological development is excellent. Public policies have not sufficiently addressed reforms of labour markets and educational systems. This has put pressure on individuals and companies to adapt to new conditions. Knowledge intensive companies themselves are investing heavily in competence development as part of an economic and innovation agenda. In this sense, the companies have the initiative. We therefore see an increasing polarisation in life quality and general development opportunities between those who have a job and those who do not.

5.1. Technology - integrated

Technology is well developed and used in many areas. There is a good wired and mobile infrastructure in most countries, and we see very advanced uses in many different areas and industries. There are vast developments within the area of ambient computing and personal agents. The sector of e-learning is one of a number of dominant actors in this development. The driver has been a rapidly growing demand from companies and citizens who are constantly trying to develop skills and competencies with the main emphasis on human capital. As a result, e-learning applications have been going through some very interesting development phases and have reached a very high level of quality and customisation. In addition, new business models have emerged.

5.2. Economy – good

Globalisation has continued at its rapid pace involving more and more industries and service sectors in Europe. Seen from a macro economic perspective this development is to the benefit of all actors involved, as it allows companies to focus on the development of core competencies, and it forces companies to invest in human resources to the benefit of individuals in the labour market. Consequently, productivity is rising. Many EU countries are finding it hard to develop and implement labour market policies and initiatives that successfully deal with the consequences of outsourcing. This means that society is undergoing an increasing economic polarisation and that the pressure on reforming welfare policies and welfare benefits is increasing. Consequently, the long-term effects of the economic development may become highly volatile unless the urgency of sustainable labour market reforms is addressed.

5.3. Social – cohesion

5.3.1. Life style

The increasing globalisation of trade and production has negative effects on the labour market and the general employment rates in the EU. An increasing number of citizens are looking for something tangible and other value sets with which to identify. The notion of community and in some instances the national state is therefore in fashion again, and while many companies think and act globally, citizens, local governments are struggling to find new identities and values.

5.3.2. Education

Compulsory schooling

National governments are under increasing pressure to deal with the negative effects of the wave of off-shoring. So far, few initiatives related to cohesive educational reforms have been taken. Investment in the educational system is primarily taking place in higher educational institutions, and the youth schooling systems are suffering significantly from this. As buildings decay and no investments are made, the educational system and individual teachers find it increasingly harder to find personal and economic resources to develop new ways of teaching. Consequently, this part of the educational systems lacks the funds and the motivation to implement and use e-learning as a tool. This also applies to the investments made in e-learning in the middle of the decade – many of these tools are simply not being used.

Another effect of the downsizing of public schools is that an increasing polarisation of public and private schools is taking place. More and more parents are putting their children in private schools, and these schools have the resources and motivation to develop and implement e-learning. Consequently, many private schools have established networks where content is being developed and shared.

VET

The situation in the VET system is complex. Private companies are very interested in dialogue and collaboration with the VET system, but quite often schools lack the resources and initiative to engage wholeheartedly in such interactions. This means that much of the development in e-learning is coming from industry organisations or companies large enough to finance the investment. Such initiatives often focus on simulations and visualisation applications that will allow students to “virtually” interact with the complex machinery and workflow that they will face when they have completed their vocational training. In some nations, this cooperation between private sector representatives and the VET systems has been coordinated very successfully and as a result, national standards for e-learning systems in VET are emerging. In countries with a less prominent tradition for collaboration between the public and the social partners, initiatives are scattered and not tied together.

Higher education

Although higher educational institutions are receiving fewer public funds, they are doing comparatively well since there is a high demand for their services in the private sector. Many of the institutions therefore increasingly focus their orientation towards interaction with the private sector, which in some instances has negative effects on the traditional higher education. One of the problems is that teaching is much better paid when it is carried out for representatives from private companies than when it is for “normal” students and this has negative effects on quality within traditional higher education. Another problem is that e-learning is predominantly used for the private sector since it demands the flexibility much more than traditional students.

However, there are also positive stories. A number of EU Virtual university initiatives to increase the numbers of graduates and postgraduates in science-based education sprung up. Inspired by the tremendous success of Stockholm School of Entrepreneurship and their strategic partnering with the Baltic countries already back in 2005, the initiatives had a strong entrepreneurial component setting quite advanced requirements to design of educational software. Whereas programming takes place in India, program design and branding has

become a very attractive market for European players as well as an expert competency predominantly found in Europe.

5.3.3. Government initiatives related to e-learning outside the educational system

Since governments are attempting to free resources to cope with the negative effects that off-shoring has on the labour market, very few resources are invested directly in e-learning. The rationale behind this is that since the technological preconditions already exist for excellent e-learning, the “market” should not need further incentives to create such products. To a certain extent, this interpretation seems to hold true. The few investments made are predominately related to technological infrastructure issues, legislation, and standards.

5.4. *Work development – long-term*

5.4.1. Strategies and actions in traditional industries

Although companies in traditional production industries are under considerable price-based competition, they maintain a long-term horizon in their strategies and actions. Some jobs are off-shored, but many companies have managed to develop production processes to become more efficient and flexible, which allows them to produce high-quality products at competitive prices using low-cost labour intensive production from low wage countries. The key to creating flexibility and incremental and production-based innovation has been to educate and train the workforce based on comprehensive on-the-job training schemes, since public policies do not comprise any major investment in vocational training and lifelong learning. In-house programmes cover different competence aspects as well as new work organisation practices to engage workers in innovation of the production process these days, workers are able to perform very different jobs, thereby enhancing the functional flexibility of the companies. E-learning plays an important role in training processes since it facilitates an effective and problem-situated just-in-time approach when it comes to learning related to complex production facilities.

The development described above is accentuated by the fact that public institutions have had a difficult time adjusting labour market initiatives and the educational system to the new realities. Companies must therefore form long-term relationships with their key personnel to keep them onboard. Well formulated and executed plans for lifelong learning play an important role in this.

5.4.2. Strategies and actions in knowledge intensive companies

The strategies of the knowledge-intensive companies do not differ significantly from those of more traditional production companies, because the latter have been going through major restructuring processes. R&D and education are among the most important competitive parameters and e-learning plays an important role in relation to this. Although these companies often start their search for providers of e-learning in the public institutions for higher education, more often than not they end up using the products and services of private companies. This is due to the fact that many of the higher educational institutions simply are not geared (and lack the incentives) to deal professionally with private companies in any direct manner on any large scale

5.5. *E-learning industry structure – heterogeneous*

5.5.1. Distribution of power and influence in the value chain

The significant demand from businesses, organisations and their employees eager not to lose out in the labour market is benefiting the e-learning industry. Since integration dominates the infrastructure as well as hardware and software, there are many opportunities to develop and customise e-learning products. With many new companies and existing companies basing their strategies on new technologies, content providers are popular partners. This places organisations possessing content - such as universities and publishers - in a strong position in the e-learning value chain, where e-learning providers function as brokers to the different actors in the value chain. Strong and well-implemented laws relating to DRM and IPR support this.

5.5.2. New entrants

The continual development of new niches and re-orientation of e-learning products means that the sector as such is very heterogeneous. Naturally, there are dominant players in all segments but their share of the market is not nearly as big as dominant companies in other industries (e.g., media and entertainment). This leads to a market situation (and psychology) where innovation thrives and a number of small start-ups challenge the existing players with new products and uses of e-learning. Such initiatives are often backed by local or international venture funds that have regained trust and interest in the industry as the results of the dominant players improve.

5.5.3. Dominating strategies

Companies serving the educational system generally have a hard time since there are very few financial resources available and little motivation from the teachers in relation to new e-learning initiatives. The few companies that have success in this segment typically achieve this by creating low cost products that can be mass customised, which enables them to achieve a critical mass of customers to cover development costs.

Companies serving the traditional industries are in a very interesting segment where there are a lot of opportunities and challenges, because of the developments in flexible production chains. Successful e-learning applications for this segment are often based on collaborative development/customisation, where key personnel from the customers are involved in the development process. This ensures that the solutions become embedded in the organisational reality and are streamlined in relation to the overall strategy and technical set-up.

Companies serving the knowledge intensive segment often have a hard time identifying, accessing, and organising the kind of high quality content that is needed for such solutions. They are therefore very dependent on close contacts with the customer, and most content is therefore created in collaboration with the customer in a way very similar to the one described above.

5.6. *Labour market – flexibility not working*

5.6.1. Government initiatives related to the labour market

One of the major challenges in this scenario is the labour market. The EU, national governments, and social partners, have not been able to find the right mix of incentives and

initiatives to create a flexible labour market. This is especially hurting employees that are made redundant by the waves of outsourcing going through the EU. Since these citizens have limited access to relevant educational initiatives and limited resources to fund educational activities themselves, many are caught in a negative spiral where their employability rapidly diminishes.

Another problem is national governments' failure to develop and implement international standards and certifications for the description and testing of knowledge and competencies. As a response, some companies have developed their own standards, and this makes it even harder for governments to seize the initiative in relation to this issue.

5.6.2. Social partners' initiatives related to Labour market

The most effective initiatives to counter this are activities planned and implemented in collaborative actions between social partners and groups of companies looking for new labour. However, there are not nearly enough of such initiatives to counter the trend created by "off-shoring".

5.7. *Market perspective at a glance*

5.7.1. Market diagnostic

The e-learning market is generally very healthy and characterised by competition based on innovation. Integration and customisation are the keys to gaining access to private companies

5.7.2. Nature of demand

The educational sector demands cost-effective designs that are customisable to local needs and conditions. Companies in the traditional industries as well as knowledge intensive companies demand highly customised just-in-time solutions. This puts pressure on innovation of new forms of highly embedded e-learning models.

6. Web-survey on the future of the e-learning supply market in Europe

6.1. *Introduction*

During the period from 19 August to 3 September 2004, the project conducted a web-based survey with the aim of identifying the key trends for the future (a 2010 horizon) in the e-learning sectors. The survey was sent out to approximately 1000 people associated with the e-learning sector as users, producers, or platform providers addressing the educational sector as well as the workplace market. In total, 143 persons responded to the survey.

6.2. *Methodology*

Appendix A contains the questionnaire and the statistics from the web-survey.

6.3. *Results*

In the following sections, the results are presented in brief summary under the various headings.

6.3.1. Market perspectives

- 67% of the respondents agree or strongly agree that in 2010 the top three platform providers in European e-learning markets will have been profitable consistently for the last three years.
- The respondents are evenly divided as to whether in 2010 the e-learning workplace market will be supplied by four or fewer platform providers (44% agree or strongly agree; 50% disagree or strongly disagree).
- There is a similar picture in relation to the higher education market in 2010 in Europe; 47% agree or strongly agree and 44% disagree or strongly disagree that four or fewer platform providers will control at least 50%.
- 59% of the respondents think that one or more of the four dominant platform providers addressing the workplace market will be one of the current European owned providers.
- 73% of the respondents agree or strongly agree that in 2010 companies with core competencies in content for mobile devices are increasingly focussing on the e-learning market as a new source of income.
- 57% of the respondents agree and 24% strongly agree that in 2010, the big publishers will have a more dominant role in the e-learning value chain than in 2004.
- 68% agree or strongly agree that by 2010 a wave of mergers and acquisitions will have swept through the EU joining up several small and medium sized e-learning suppliers from different countries into single larger companies
- In relation to European Higher Educational institutional cooperation with other actors, respondents are positive about different types of cooperation. For example, over 50% believe they will cooperate with businesses to develop online content tailored to their individual needs; almost half expect them to co-operate with global university players to adapt their courses to European markets, and the same number say they will cooperate with higher education institutions in developing countries to adapt online courses to local markets in these countries.

The respondents were asked to select which of the following customer segments in table 1 is most likely to be the dominating source of income for SMALL e-learning content providers in 2010: (select the three most important segments)

Table 1	No.	%
1) Sub-supplying for large publishers	62	14,5%
2) Primary and secondary education	27	6,3%
3) Higher education	44	10,3%
4) Business	76	17,7%
5) Large public institutions	37	8,6%
6) Business predominantly SMEs	49	11,4%
7) Corporate university	34	7,9%
8) Consumer market	22	5,1%
9) Vocational education and training institutions (VET)	78	18,2%
In total	429	100,0%

Small suppliers will find their future markets among VET institutions, businesses, and sub-supplying to large publishers; to a lesser extent supplying SMEs and higher education.

- The respondents are evenly split regarding their expectations to the workplace-based market believing it will grow fastest, approximately one third opting for SMEs, large private companies and the public sector. There is strong agreement, however, that professional organisations (85% of respondents) will become an important intermediary in the e-learning sector. Many also believe that telecommunications providers will play an important role (55%)

6.3.2. Technical perspectives

- Although integration of LCMS with other enterprise systems in the organisation is seen by many (44%) as the dominant trend relating to management of e-learning in 2010, others believe that other trends are equally likely (outsourcing, separate internal systems)
- Over half believe that by 2010 language technologies will be developed to allow for automated real time learning between different language groups, with one third disagreeing.
- 74% of the respondents agree or strongly agree that by 2010 standards (SCORM or others) will be successfully extended and made flexible to include real time learning processes, simulations, games, customised adaptive learning and digital rights management

In 2010, new developments in simulation and learning through visualisation techniques will have significant commercial impact in the sectors in table 2. The respondents were asked to select the two most important sectors and the two sectors that really stood out were Military and Healthcare, although engineering also could become an interesting market for simulations.

Table 2	No.	%
1) Military	81	28,3%
2) Transportation	14	4,9%
3) Healthcare	84	29,4%
4) Engineering	42	14,7%
5) Manufacturing	29	10,1%
6) Design	29	10,1%
7) Other	7	2,4%
In total	286	100,0%

- Open source will offer a serious competitive alternative for users in higher Education (67% of respondents), VET (44%) and workplace (41%).
- 76% of respondents agree or strongly agree that ambient technologies will allow technology supported learning to be integrated into the work processes.

6.3.3. Globalisation perspectives

- 65% of respondents agree or strongly agree (a quarter of respondents strongly agree) that in 2010 the dominating suppliers have off-shored significant parts of their production of e-learning to low cost countries.

The respondents were asked which two of the following markets will experience the highest growth rates (in terms of demand) in 2010. The results are presented in table 3.

Table 3	No.	%
1) China	96	33,6%
2) India	49	17,1%
3) New EU countries	63	22,0%
4) Old EU countries	37	12,9%
5) North America	30	10,5%
6) Other	11	3,8%
In total	286	100,0%

6.3.4. Educational and content perspectives

- 53% of the respondents suggest that the culture and organisation of teaching and learning in the educational institutions will be the most challenging barrier to the integration of e-learning in Education. Half of the respondents believe lack of reform and credit transfer in Higher Education will act as a significant barrier with over 40% considering failure to recognise academic personnel efforts also as a significant barrier. .
- 60% of the respondents disagree that the majority of teachers in compulsory schooling will design and jointly develop their own content resources and share these across the networks.
- There is a fairly even split as to whether learners in 2010 in post secondary and higher education will create their own learning environment – where they learn – design and populate it and control who has access to it (41% agree or strongly agree; 49% disagree or strongly disagree)
- There is a similar divide as to whether 50% of digital learning content used in the workplace will be developed internally/by user organisations (42% agree or strongly agree; 49% disagree or strongly disagree)
- A culture where users do not expect to pay for the content and services will be the biggest obstacle relating to the protection of IPR and management of digital rights in e-learning

The respondents were asked which two of the following uses in table 4 will contribute most to e-learning activities in private homes in 2010.

Table 4	No.	%
1) Courses that are part of higher education	69	24,1%
2) Courses that are part of vocational education and training	57	19,9%
3) Primary and secondary education	24	8,4%
4) Courses that are part of employer initiated learning activities	53	18,5%
5) Private and personal learning and entertainment initiatives	79	27,6%
6) Other	4	1,4%
In total	286	100,0%

The respondents believe that mainly be private and personal learning and entertainment initiatives and higher education courses will be carried out from private homes. However, VET courses and employer led courses also seem likely uses. As a contrast, not many respondents expect school pupils and youth accessing much e-learning from home in the future.

6.3.5. Government policy perspectives

- The three main expectations in terms of public policy is that 20-25% of the respondents consider it likely are that there will be continued investment in the integration of e-

learning in education, investment in teachers competence and investment in standardisation and quality assurance. Only 6% believe that governments will stop investing.

7. Conclusion

The future analysis does not provide a clear picture of where the e-learning sector is heading. The web survey indicated many areas where the respondents disagreed on how the sector would develop. There was a disagreement on the following developments in 2010:

- Concentration of platform sales to the workplace and Higher Education markets on few large players
- Whether one of the four dominant platform providers will be one of the current European operators
- Whether language technologies will be developed to allow for automated real time learning between different language groups
- To what extent teachers in schools will develop and share their own e-learning content
- To what extent learners in post secondary and HE will create their own learning environment – where they learn – design and populate it and control who has access to it
- To what extent digital learning content will be developed in house in workplace markets by user organisations
- Which will be the dominant government policy strategies in 2010 in relation both the education and the workplace markets.

On the other side there seemed to be a majority agreement on the following developments for 2010:

- The three biggest platform providers in the European market will have been profitable consistently for three years in 2010
- Mobile devices producers will be focussing on the e-learning sector as a source of revenue
- Global publishers will have a more dominant role in the e-learning value chain than today
- a wave of mergers and acquisitions will have swept through EU, joining up several small and medium sized e-learning suppliers from different countries into single larger companies
- Professional organisations will play a role in the e-learning market as intermediaries
- The two most dominating trends in terms of e-learning management will be outsourced to external operator or totally integrated within enterprise suites, in contrast to separate internal systems for e-learning
- standards (SCORM or others) will be successfully extended and made flexible to include real time learning processes, simulations, games, customised adaptive learning and digital rights management
- Open source e-learning will primarily develop in the higher educational sector
- Ambient technologies will mean that appliances/tools/workplace machinery, technology supported learning will be integrated into the work process. (Ambient technologies are applications that sense when the user needs a learning session.)

- The major e-learning providers will have outsourced significant parts of their production of e-learning to low cost countries like India and China as well as East European markets, primarily on software development, but increasingly also on e-learning content, although early signs suggest that this may lead to quality problems, because of cultural differences and language barriers.
- Institutional Culture and Internet behavioural culture will play major roles in shaping the development of digital rights, copyright and demand for e-learning at educational institutions

In addition, the future scenario work and discussions with representatives from the e-learning sector indicated that:

- The combination, integration and blending of technology supported learning with other forms of learning, education and training will continue in the future. In fact, in terms of the workplace market, it is likely that the integration will be even more closely linked to work activities and processes through ambient technologies and improved performance support systems.
- In terms of the educational sector, much will depend on the degree to which the institutional cultures and systems will change and adapt to new ways of learning. The main point of focus will not be services and platforms, but content and methodology of teaching and learning.
- The public sector, both as an investor in education and training for employees in the public sector as well as the source of funding for policy actions aimed at stimulating e-learning developments, will continue to play an important role in fuelling growth and business development in the e-learning sector.
- As the sector evolves and suppliers seek out new markets a greater degree of fragmentation of the demand side can be foreseen for the future both in terms of organisational and individual target audiences/markets, but also in terms of the process specialisation demanded of the suppliers. This will represent both opportunities and threats for existing suppliers as well as new entrants.
- The extent to which standards will be adopted not just among platform providers and standard content providers, but also among bespoke content suppliers and users of e-learning will depend on how quickly the standards reach the level of functionality that is required by the e-learning community, the extent to which public and private procurement authorities will set up requirements for suppliers to adhere to the standards (as it has happened in Italy – See Italian National report) and how well the standards will be disseminated to relevant audiences.
- The use of open source e-learning tools in the developing countries is an emerging trend which may be enhanced further through the funding of large world-wide support organisations like Unesco, WHO and the World Bank.
- For the final report, actors within the sector expressed a wish to see an analysis of the future developments and implications for suppliers addressing each of the main markets.
- The SME market will still be difficult to develop and penetrate in the future. The cost and lack of ICT skills, recognition of value and tailored services will be the main barriers associated with the penetration of this market.

Appendix

7.1. Appendix 1: Web-survey

Written replies - eLearning future

– 143 replies on 6 September 10.00 a.m.

Questions nos. 7, 17, 19 and 21.

7	Which of the following customer segments is most likely to be the dominating source of income for SMALL eLearning content providers in 2010: (select the three most important segments)		
17	17) In 2010 new developments in simulation and learning through visualisation techniques will have significant commercial impact in the following sectors: (please select the two most important sectors)		
19	19) Which two of the following markets will experience the highest growth rates (in terms of demand) in 2010.		
21	21) Which of the following uses will contribute most to eLearning activities in private homes in 2010 (choose only two of the following):		
		Number of replies	%
7	1) Sub-supplying for large publishers	62	14,5%
	2) Primary and secondary education	27	6,3%
	3) Higher education	44	10,3%
	4) Business	76	17,7%
	5) Large public institutions	37	8,6%
	6) Business predominantly SMEs	49	11,4%
	7) Corporate university	34	7,9%
	8) Consumer market	22	5,1%
	9) Vocational education and training institutions	78	18,2%
	Total	429	100,0%
		Number of replies	%
17	1) Military	81	28,3%
	2) Transportation	14	4,9%
	3) Healthcare	84	29,4%
	4) Engineering	42	14,7%
	5) Manufacturing	29	10,1%
	6) Design	29	10,1%
	7) Other	7	2,4%
	Total	286	100,0%

	Number of replies	Number of replies	%
19	1) China	96	33,6%
	2) India	49	17,1%
	3) New EU countries	63	22,0%
	4) Old EU countries	37	12,9%
	5) North America	30	10,5%
	6) Other	11	3,8%
	Total	286	100,0%
		Number of replies	%
21	1) Courses that are part of higher education	69	24,1%
	2) Courses that are part of vocational education and training	57	19,9%
	3) Primary and secondary education	24	8,4%
	4) Courses that are part of employer initiated learning activities	53	18,5%
	5) Private and personal learning and entertainment initiatives	79	27,6%
	6) Other	4	1,4%
	Total	286	100,0%

No.13: 8) To which extent will European higher educational institutions co-operate with other actors in relation to production and delivery of online based international eLearning modules in 2010: (Other:)

Higher educational Institutes find it difficult to co-operate with any one! They live in their own little worlds

With teacher education agencies in the development of content and upskilling of teachers as part of ICT revolution in schools

They will create brokerage platforms in consortiums with platform providers, government and EC,

Talking about e-learning /e-content it's important to consider about the target group example: unemployed, second chance education In 2010 the scenario will be more fragmented

They will accredit other provision

I have no idea!

They will always demand financing and will do little to nothing on spec.

I believe that educational institutions will be increasingly marginalised by the corporate training sector through failing to understand the different wants and needs of the sector.

They will produce field specific curricula in university networks/consortia for their own use, at least in countries without tuition fees and a competitive "HE market"

They will co-operate with business to tailor courses to organisational needs

They will be networking with more alert alternatives to the traditional higher educational institutions

Professional training

They may cooperate with unis in other countries - not necessarily "global uni players" - as Curtis Bonk suggests (he's doing it now).

They will cooperate with governments as mandated and funded by the governments.

Educational institutions in Europe don't feel market pressures

No.15: 10) Which of the following intermediaries will provide eLearning services in 2010: (Others, which?)

Advertising agencies

Schools who provide e-learning for small target groups example: adult with dyslexia, people with small brain damages....

Commercial suppliers

Healthcare, Public service companies, universities

I have no idea!

Commercial portals

Virtual Universities (network of universities)

Everyone.

Chambers of Commerce

Educational institutions who buy and combine chunks of e-learning content with own content on the basis of standard formats (i.e. like publishing on demand).

Public market and educational institutions

Higher Education

Depends on what you MEAN by eLearning - maybe commercial companies will give eLearning for the background knowledge to their wares?
Org mgt and training consultants may licence/franchise use of e-learning products locally.
Small businesses (SME-run) will provide a large segment through consulting services.
eLearning is about flexibility.

No. 17: A-Com) Other comments in regard to market structure?

There will be t market for e-learning. The commercial and the public institutions
Large companies will follow public institutions closely, but SMEs will still lag a long way behind. Cost and lack of recognition of value are the problems.
A mixture of the above actually.
It will be support by Public institutions, but It will make by private companies
The private education sector, trade unions and sector councils
BY 2010 the large private company market will have reached maturity
The SMEs presently appear to lack commitment to e-learning where as public institutions have a requirement by legislation to deliver subjects such as awareness to staff which can best be delivered by e-learning
Public organisations will be the main business market in Finland
Market segmentation (horizontal, vertical, geographical) continues to be one of the main characteristics of e-learning in Europe
public sector (administration)
joint ventures between publishing houses individuals and institutions.
but also the schools and universities
Smaller companies don't have the funding to purchase e-Learning products; they may use products that are free with the software/services/ products they purchase.
individuals
In Europe, public structures will continue to be a major market.
The main point in Education is not services and platforms but content and methodology of "teaching" - now (2004) we have schools, what we'll have in 2010?
Most of e-learning providers will not be market players, but institutions
Before 2010, I expect large private companies to be the fastest growing marketplace.
Public institutions will lead 2006-2007, and fall behind until 2015

No.19: 12) What will be the dominant trend relating to management of eLearning in 2010: (Other, which:)

Don't know
accreditation
Outsource, integration of LCMS in company and separate internal ICT systems managing eLearning activities.
I have no idea!
Integration into wireless solutions, retail products (how to) and television
Ensuring high quality content and process
Department level solutions will provide the flexibility and low cost needed to justify the investment. We don't see corporate word processing solutions, so why should we see corporate eLearning authoring solutions?

No.23: 16) In which of the following markets will open source eLearning platforms offer a serious competitive alternative for users in 2010 (Others)

Question not specific enough to be answered

Don't know

May include Higher Education but at a slower pace.

I have no idea!

developing countries (e.g. in Latin America, Africa), in countries with strongly centralized educational systems (e.g. in some Arab Countries)

Public sector

Developing countries are very interested in this area - may form part of World Bank funding, and trickle back to Voced, primary and secondary ed.

Public administration

public administration is already going into this direction

No.28: B-Com) Other comments in regard to technological development?

This was said about access for the disabled - the truth is someone has to be bothered to set stuff up all the time - mostly people want one thing to do everything

I estimate using strongly the collaborative platforms also in this area

Performance support systems will reach a professionally accepted level with system developers

Slowly evolving at present.

Integration of computing in every we do, 7/24 / /

Slower than expected!

The distinction between e-learning and performance support systems will have disappeared

The target year 2010 is not far away - the technologies that will be shaping the market are already tested today, and I do mean that they are in early prototype phases!

Accessibility technologies will get better

distributed learning and collaborative learning will be the future

LCMS will be standard backbone software in the IT-infrastructure in comparison to ERP, CRM, HR, XX using front-ends for internal users (intranet), partners (extranet) and customers (internet).

Time is an issue. So they will shift training to the workplace more and more.

Technological development is one thing, and the use of such developments another...

Technology is a tool, not a solution. Proper management/oversight of employees cannot be replaced by automation.

No.34: C-Com) Other comments in regard to globalisation?

If you talking of content I disagree

By 2010 low cost countries may have a different meaning than what is interpreted now as being.

New players will appear from developing countries

We already perceive a backlash to off-shore production. Quality issues are starting to make it unattractive to discerning users (albeit, currently a minority)

In 2025, not in 2010.

They'll outsource in 2004-2006 and find out what a big mistake it is by then.

No.39: 22) Which of the following barriers to the integration of eLearning in education will be the most challenging in 2010: (Other:)

It is a combination of all mixed with the reality few teachers have the hardware or software skills.

The quality of the learning resources and the types of 'interactivity' and tailored responsiveness displayed by the LMS

the costs of developing eLearning content

Government funding to support e-learning as a delivery mechanism

The pace of change in the technologies compared to the slower processes of organisational change.

All of these describe the situation now. Hopefully it'll be different in 2010.

By then the baby boomer teachers will have retired; the younger teachers will be interested in introducing eLearning, and governments expending vast amounts of funding will be pushing it!

No.40: 23) Which of the following barriers to the integration of eLearning in higher education will be the most challenging in 2010: (Other)

The culture of the Institutions

Recognition that media/e-learning can transform learning behaviours and that new modes of assessment, that are more oriented towards activity and 'creation' will be needed.

The lack of cost effectiveness and ability to handle large-scale online education effectively. See www.studymmentor.com

infrastructure and technical support

Both of the above combined with incompetence of large numbers of academics and a lack of will to change and update.

Current eLearning Content and delivery on the market includes large systems which often fail unable to produce the income predicted.

staff willingness to utilise the technology

Lack of resources (money, time and incentives)

Lack of de-regulation regarding traditional higher education institutions.

Don't know.

lack of cooperation from different institutes an universities

The lack of recognition of any kind of activity related to e-learning (creation, tutoring...)

People will declare eLearning a failure because they will expect it to completely replace classroom teaching. By 2015, a good balance will be achieved.

No.41: D-Com) Other comments in regard to usage?

We need to think beyond technologies and e-learning as simply extensions or enhancements of current practice.

Read my article "online education Obituaries" www.studymmentor.com

Teachers will not see personal economic benefits from e-learning and thus will not promote it.

Transfer across Higher Education Institutions will not be enough.

The lack of reliable evaluation systems

Note that these questions relate to education e-learning. The issues for corporate e-learning are rather different

I would expect e-learning to be recognised as a natural component of education training and cpd, without being seen as the whole picture.

the lack of long term and elaborate research on the effectiveness of e-learning on the basis of really interactive content.

The greatest hindrance is lack of basic computer skills by SMEs.

No.48: E-Com) Other comments in regard to content production?

The global nature of the industry means that it will be difficult to track rogue outfits who can move jurisdiction to avoid legal actions.

When we are talking about authors rights We need a public solution like copy dan in Denmark

Motivation to ensure rights will be low. Re-usable material will be a commodity.

Concerns over access to high quality content, leading to disparities between well funded and poorly funded educational establishments. Need for open source, reusable content.

In higher education there are not many specific fields which make lucrative markets. The needs in the HE are specific, but there are not very much money available to pay for tailor-made commercial content or technological tools.

In 2010 over 50% of digital learning content used in the workplace will be developed internally/by user organisations: The amount will be significant, however the biggest money and investments go to 3D simulations etc. productions that are outsourced Again, this question describes the situation now. I would hope that all these things will have sorted themselves out by 2010.

There is also a lack of competence in that field

No.50: 29) What will be the dominant government strategy relating to the investment in eLearning in education in 2010: (Other:)

Don't know

Government strategies are short-term. By 2010 government may well be struggling to update and replace equipment currently being installed.

I have no idea!

None. Sorry to say.

No.51: 30) What will be the dominant government strategy relating to the investment in workplace eLearning in 2010: (Other:)

I expect that there will be no government strategy!

See strategic recommendations in my book www.studymmentor.com

all of the above in a chaotic lack of understanding and demand for long term results from the money invested.

A bad mix of all listed.

I have no idea!

Investment on integrated systems and support organisations

Subsidised eLearning provision may take place for employment reasons (re-training purposes). Financial incentives will be used to encourage companies to (e-)train their staff.

None.

I do not know

No strategy

Standardization, standardization, standardization, and assisting eLearning providers in the minister's home districts

No.52: F-Com) Other statements or opinions in regard public policy?

Once a robust broadband infrastructure is in place, e-learning will no longer be discussed separately to learning. The economic emphasis will shift to the encompassing sphere of 'digital content' of which e-learning content will be but a small part. Games and entertainment is what will grab headlines and interest.

There are many recommendations about public policy in my book
www.studymmentor.com

more emphasis on the offer to the learner and less on the product

Governments will continue to support publicly funded institutions, and forget that it is the private sector that usually initiates large change.

Public policy in the UK is strongly driven by educational targets. Corporate e-learning is neglected by central government.

It'll be a component of policy intervention in the labour market, perhaps not really differentiated from other media and provision models.

The social responsibilities of government will require it to implement projects to increase access across all social groups.

Public policy does not feel concerned by the methods used for learning

Successful cases come from a bottom-up approach (grassroots level). When eLearning is imposed at the enterprise level, the need is not felt by the workers.

Without a feeling for need, completion rates are low

No.54: G-Com) Any other comments in regard to eLearning or to the study?

Fascinating questions!

A very useful study into an area dear to my heart. As you will have gathered, I'm quite pessimistic that anything significant will happen over the next 6 years.

The comparison to Desktop publishing is ... right on the nail. Why pay expensive money for something anybody can do in-house for their daily needs?

What has surprised some teachers who develop content and their students when attending eLearning and Computer Trade Shows that the current content developers and deliverers lag behind what a teacher can similarly use outside the institution for free.

The style and phrasing of the question was difficult sometimes

Perhaps in 2010, eLearning will be learning
sometimes difficult to project unto 2010

Very interesting approach to ask those implicated in the field to think ahead. Bravo.

I'd like to see a similar survey in the Americas. Would like to help if this would be possible. Thanks. info@jednm.com

We have done a considerable amount of work in this area that might be of interest to the project.

Interesting study. / Thanks for forwarding results

Many of the questions in the survey was difficult to answer, given that the questions have in mind the European context.

can't wait to see your results! in the meantime, have you seen the reports from LEONIE surveys (Weak Signals & Delphi)?

You give too much attention to "platforms". Like discussing what kind of bricks we should build new schools with.

Still very "e" focused; I think I see a growing acceptance of blended approaches, which means that many of the questions will apply to training and education as a whole.

I think that in many cases a public-private approach will be use, as it's the most efficient ways

no

2010 is too far away to make this study anything other than informed guesswork. All the surveys taken 2 or 3 years ago have already proven to be wildly wrong in the elearning market. Also the study tries to cover the whole of the market when most commentators are either in one "camp" or the other. My area is the private sector and I know relatively little about the education sector. I am certain that the same applies with those in the educational sector. Even then, I am hesitant to make any predictions about the provaye sector market six years from now.

The answers provided are from what is currently understood about the position of elearning in the respondent's country.

is the future

7.2. Appendix 2: Persons that attended the supplier summit in Brussels on 8 September 2004

Company	Name
E-learning consultant	Jane Massy
Danish Technological Institute	Knud Erik Hilding-Hamann
Danish Technological Institute	Jonas Svava Iversen
Transware Plc	Julian Wragg
Transware Plc	Kieran McBrien
IBM Europe	Corinne Schulze
Promissor	Suzana Lopes
Training Foundation	Hywel Thomas
E-learning consultant	James Kigin
University of Reading	Keith D. Baker
IBM Europe	Fanuel Dewever
Norway Opening University	Dag Rune Ramstad
SumTotal Systems	Sarah Nesbitt
Tieturi Online Oy	Pia Erkinheimo-Mennander
IBM Europe	Craig Yetter
European Commission	Maruja Gutierrez-Diaz
Heriot Watt University	Graeme Martin
EPIC PLC	Donald Clark
Microsoft	Kimberly Voltero
Explo	Marc Devijver
European Commission	Brian Holmes
European Commission	Patricia De-Smet
European Commission	Salvatore-Pasqua Angilletta
European Commission	Kirsti Rye-Ramberg