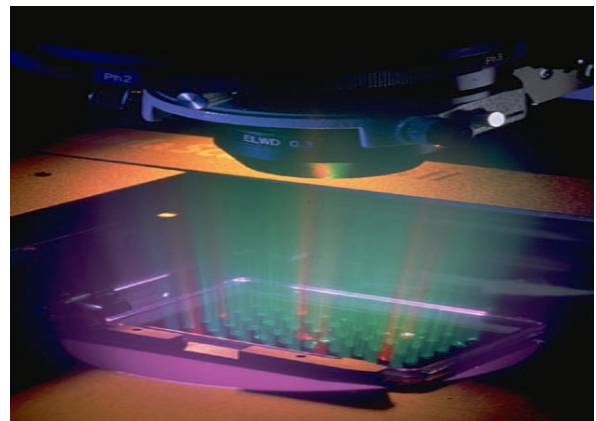


Best Practices in e-Learning Study



This study is a deliverable of the “INNOEARNING – Fostering Innovative Self-Learning for Work in the EU Through Dissemination of Innovative Structures and Applications Identified in the USA and Europe” Project

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Executive Summary

As defined by the American Society for Training and Development (ASTD), e-learning “covers a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaborations”. In the context of this study e-learning is defined as Internet based learning that is focused on the delivery of content (text, audio, video, animation, simulation) in a training format.

Each stage of the e-learning process requires thoughtful analysis and investigation of how to use the Internet's potential in concert with instructional design principles and issues important to various dimensions of the e-learning environment. Therefore, institutions and individuals venturing into e-learning initiatives should explore the requirements necessary to create a successful e-learning experience. This is exactly the area where this study can be a helpful tool.

The study has been undertaken with the objective of stimulating creativity and enhancing education and training systems “for lifelong learning”, consistent with the Information Society Technologies (IST) Thematic Programme’s “Key Action III” for 2001, which addresses self-learning for work and specific e-learning support measures. Through several activities, the study has resulted in the identification of “best practices” in e-learning with respect to three specific research areas which the European Commission has listed as important research topics in e-learning. The three research areas are:

1. Learner models – flexible, personal models for learning.
2. Soft skills and informal learning – supporting the learner to develop soft skills (i.e. interpersonal communication, team work, leadership, and project management) through the sharing of knowledge, dynamic learning content generation, etc.
3. Communities of learning – support for the identification and implementation of virtual communities, involving individuals with similar learning needs, within and across organisational boundaries.

At its outset, the study concentrated on developing a comprehensive understanding of currently available, and publicly accessible, e-learning websites. This was directed at two specific areas: e-learning *structures*, and e-learning *applications*. “Structures” in this sense refers to the characteristics of the sites themselves, including design and organisation. It is concerned with the pragmatic and aesthetic aspects of the site. The “applications” area, on the other hand, considers the technological components, the educational tools and methods of instruction and interaction. A pool of 40 e-learning sites was evaluated in detail with regard to criteria representing the two specific areas, structures and applications, and the top 20 sites identified.

The top 20 sites were further evaluated with respect to the three research areas, previously mentioned (Learner Models, Soft Skills and Informal Learning, and Communities of Learning). The project team conducted individual in-depth analyses of the top twenty sites based on the criteria for each of the three areas. The analyses included: interacting with instructors through the available respective site tools; attending courses; and utilizing a majority of the site added value aspects. The project team attempted to acquire additional information, such as actual number of learners per course, through a detailed questionnaire and correspondences with the respective e-learning site representatives. From this point, the “best practices” in e-learning were clearly identified for each of the three areas, and summaries of the top sites utilizing the best practices were completed. This activity brought to light the specific characteristics necessary for the application of best practices in e-learning.

The application of “flexible, personal models for learning” is a crucial aspect toward the effectiveness of instruction via e-learning. While e-learning providers have the flexibility to design and apply learning models as they deem appropriate, clearly there are approaches to this that are more advisable than others in fostering learning. It is essential that learning



models utilize or offer a range of added value tools and application that directly or indirectly assist the provider and/or learner in adjusting the learning experience to the learner's capabilities, learning goals, and preferred learning environment. The top 3 sites with regard to Learner Models are: OnlineExpert, KnowledgePool, and eLearning Centre.

Soft Skills & Informal Learning applies to learning through working together - gaining soft skills (interpersonal skills) through communicating and interacting with others. Generally, this is external to the aims of conventional learning in a classroom setting, but is greatly fostered by such environments because learners are in physical proximity and interaction takes place more naturally. In the field of e-learning this valuable type of educational development can easily be overlooked. As an important part of learning, it is only the best sites that will have made this a priority and sought to promote education through interaction despite the problem of physical distance between learners. Thus, the evaluation in this study assessed the degree to which e-learning sites supported the learner in developing soft skills (interpersonal communication, team work, leadership, project management, etc.) through the sharing of knowledge, dynamic learning content generation, etc. The top 3 sites with regard to Soft Skills & Informal Learning are: OnlineExpert, Element K, and Online-learning.

As previously defined, a "Community of Learning" refers to groups of individuals with similar learning needs, who share the educational experience and who maximize their learning through this sharing. This is deemed an essential ingredient in utilizing e-learning to its maximum potential, and in accordance with the European Community's specified interests it is one of the best practice considerations applied in this study. The evaluation took into account the specific support measures the e-learning sites utilized in order to identify and implement virtual communities, within and across organisational boundaries. The top 3 sites with regard to Community of Learning are: Eno / Smart Force, Element K, and VCampus. These sites should be commended on their structures and applications that encourage group learning. Although it is important to keep in mind that the tools provided are only effective if utilized by the learners, which is the justification for the criteria – Level of Interaction. This poses an interesting question: what online learning activities draw the interest of most learners? To answer this question a much different methodology would need to be applied that is based on surveying learners over a significant period of time that take courses on a preselected limited number of e-learning sites. The result of such an analysis would provide key information on the demand of the market for specific technology based tools.

Of the three categories considered for best practices (Learner Models, Soft Skills and Informal Learning, and Communities of Learning), the e-learning sites overall evaluated extremely low with regard to Soft Skills and Informal Learning. It is apparent that the most challenging environment for an e-learning site to create is one that encourages the development of soft skills. This is an obstacle for the industry that requires further investment in tools to foster the development of soft skills by overcoming the limitations of the e-learning training interface.

The project team also realized early in the study activities that it would be challenging if not impossible to evaluate what may be the most important criteria of e-learning sites: the true impact on the learner. This is one strong drawback of the e-learning industry. The industry is not transparent with regard to true online activity and satisfaction of the learner. Many of the claims made by the e-learning sites could not be substantiated. More importantly, the sites in general would not provide specific information with regard to such aspects as site activity, learners per course, satisfaction level of the learners, etc. The inability of acquiring this specific information limits the capability to accurately measure an e-learning site's general performance and ability to provide effective training.

Nevertheless, taking these limitations into consideration the results of this study will provide support to the actions to be carried out within the eLearning Call of September 2002 as well as the e-learning industry through encouraging the implementation of tools that provide a well rounded training experience.



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1. Introduction to e-Learning



In the turbulent business world of today, technological advancements, elevated competition and the shifting demands of business require companies to continually update their skills and capacities. This is primarily achieved through training that develops skills, knowledge and value within human resources. Consequently, training offers companies a means of gaining a competitive advantage, making it a necessity within the business strategies of successful firms. The recognition of this is evident in the expansion of e-learning, and its labelling as the second wave of the Internet.

The growth of e-learning reflects the recognition by the business world of the benefit to be gained through developing employees to be “knowledge workers”, capable of utilizing new technological tools to gain a competitive advantage. This is not limited to any specific industry or sector: “Increasingly, workers outside of the tech sector are being challenged to master technology in business processes, manufacturing, sales, distribution, and implementation of web and network-based solutions”¹.

Trends in areas such as demographics, technology, globalization, branding, consolidation/privatization, and outsourcing will greatly affect the way people learn. These trends are affecting all learning markets including early education, post-secondary education, corporate training, and consumer products and services.

As defined by the American Society for Training and Development (ASTD), e-learning “covers a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaborations”. In the context of this study e-learning is defined as Internet based learning that is focused on the delivery of content (text, audio, video, animation, simulation) in a training format.

As shown by the ASTD definition, e-learning is comprised of several methods of learning, which are enhanced or facilitated by technology. Web-based or online learning, one component of e-learning, is expected to be the fastest-growing method for delivering education and training.

Learning can no longer be dependent on locations, schedules, groups and the variable competences of trainers. E-learning solutions allow the development of permanently available personalized guidance, in which each individual can learn at his own pace, and in accordance with his own special needs. Some of the basic, yet undeniably beneficial aspects of implementing e-learning include but are not limited to:

- Reducing costs associated with conventional training
- Communicating a consistent message to employees everywhere, anytime
- Increasing learning effectiveness and information retention
- Decreasing time-to-market for new products or strategies
- Allowing employees to access the information they need, when they need it

Nowadays, a more knowledgeable customer is driving the industry. The companies implementing e-learning are requiring an e-learning system that integrates with their ERP/CRM systems. Therefore, the established suppliers of these systems, such as PeopleSoft, SAP, and Siebel, are now developing e-learning solutions. With regard to the development of content, the customers are relying more on in-house development now that they have employee resources more knowledgeable in web design.²

Similar to the company customer, the individual learner is becoming more knowledgeable of the training capabilities of e-learning. Therefore, this market is also putting higher demands and quality expectations on the e-learning industry.



Despite what was considered at the beginning of the e-learning advent, the success of e-learning will not be related only with technology. It is in the structure of the organizations that the implications of e-learning will be most profound. The best IT structure in the world will not work properly if there is inconsistency or a lack of ability in the organizations. Institutions will have to examine closely their internal policies and services and possibly make adjustments to provide a seamless distant training experience for the student.

To effectively support e-learning means it is necessary that segments of institutions collaborate in new areas. To address this issue, some institutions have merged offices. Others have adopted a cross-functional approach in which units remain independent but collaborate, cross-train staff, and engage in joint planning.³ New technologies will continue to provide an opportunity to rethink the traditional roles and responsibilities of staff, faculty, and administration. It will be through structural change that the gap between students and efficient services, between administrative processes and the classroom, will narrow. The result may be a more administratively coherent system that leads to enhanced teaching and learning.

Each stage of the e-learning process requires thoughtful analysis and investigation of how to use the Internet's potential in concert with instructional design principles and issues important to various dimensions of the e-learning environment. Therefore, institutions and individuals venturing into e-learning initiatives should explore the requirements necessary to create a successful e-learning experience. This is exactly the area where this study can be a helpful tool.

The following study identifies a series of e-learning best practice examples. As important, the study describes in detail the criteria used to select the best practice sites, thus providing individuals interested in upgrading or implementing an e-learning site important aspects that must be considered to provide the learner an effective learning experience.





2. Description of the Study

This study has been undertaken with the objective of stimulating creativity and enhancing education and training systems “for lifelong learning”, consistent with the Information Society Technologies (IST) Thematic Programme’s “Key Action III” for 2001.⁴ Specifically, the study is directed at:

Identifying innovative structures and applications of e-learning within the United States and Europe.

The study is one of a series of activities aimed at fostering innovative e-learning development within the European Union through dissemination of “best practice” innovative structures and applications.

These activities are directly in-line with two items (items 2.1 and 5.3) of Key Action III, which addresses self-learning for work and specific e-learning support measures. Through these activities, this study has resulted in the identification of “best practices” in e-learning with respect to three specific research areas which the European Commission has listed as important research topics in e-learning, and in the widespread awareness of these findings. The three research areas are:

4. Learner models – flexible, personal models for learning.
5. Soft skills and informal learning – supporting the learner to develop soft skills (i.e. interpersonal communication, team work, leadership, and project management) through the sharing of knowledge, dynamic learning content generation, etc.
6. Communities of learning – support for the identification and implementation of virtual communities, involving individuals with similar learning needs, within and across organisational boundaries.

In order to attain these goals, the study was designed using a progressive series of steps, each building on the previous. A brief description of the study activities, and an overview of the steps involved, is presented below.

At its outset, the study concentrated on developing a comprehensive understanding of currently available, and publicly accessible, e-learning websites. This was directed at two specific areas: e-learning *structures*, and e-learning *applications*. “Structures” in this sense refers to the characteristics of the sites themselves, including design and organisation. It is concerned with the pragmatic and aesthetic aspects of the site. The “applications” area, on the other hand, considers the technological components, the educational tools and methods of instruction and interaction.

The foundation established through this initial activity was intended to lead to the identification of the best uses of structures and applications currently being practiced by e-learning providers. Once these sites were identified, they were further evaluated with respect to the three research areas, previously mentioned (Learner Models, Soft Skills and Informal Learning, and Communities of Learning). In this manner, the initial study focused the evaluation on the appropriate sites, as it brought to the forefront specific sites utilizing appropriate practices in e-learning.

From this point, the “best practices” in e-learning were clearly identified for each of the three research areas, and summaries of the top sites utilizing the best practices were completed. This activity brought to light the specific characteristics necessary for the application of best practices in e-learning.

The next phase aimed at enhancing the study’s conclusions, and ensuring the widespread dissemination of the results. This was first addressed through a project seminar, attended by



participants in the e-learning industry in Europe. The seminar was designed to gain input from e-learning practitioners, and to bring the study findings to their attention. In this way, it is anticipated that the study results will be put into practice in current e-learning operations. Beyond the seminar, the dissemination of results was addressed through providing the study to relevant education and training projects under the IST Programme, and posting the study on the Internet.

The details of the study activities are described in section 4 – Presentation of the Work.



3. European Community Parallel Activities in e-Learning

The European Community has invested considerably over the years through programmes such as Socrates, Minerva, Leonardo, ADAPT, Emploi, etc. as well as the 3rd, 4th, 5th and now the 6th Framework Programmes in the area of e-learning.

Recently e-learning has received even greater attention, therefore it is not surprising that the European Commission has placed a priority in applying it as a tool to enhance the abilities of its citizens and ensure the competitive standing of Europe in the world. This agenda has led to the development of efforts to promote the widespread use of e-learning, and to use this tool to its maximum potential.

Through the eEurope Action Plan, Europe seeks to establish “an information society for all”. More specifically, through the resolutions of the Lisbon European Council in 2000, the eLearning initiative was created. This extended the eEurope Action plan into education and training. In the words of European Commission President Romano Prodi:

“eEurope is a roadmap to modernize our economy. At the same time, through its eLearning component, it offers everyone, but particularly young people, the skills and tools they need to succeed in the new knowledge based economy.”⁵

The focus on e-learning has been responsible for numerous activities across Europe, including project sponsorship and special events. These events include the many e-learning seminars and conferences sponsored by the European Commission. Additionally, the list of European Commission-sponsored projects is quite extensive, and growing.

The following list is a sample of projects that were selected for sponsorship in 2001, and are now being implemented within the e-learning area. Further calls have since been put forward, and Europe’s activity in e-learning is growing.

Projects undertaken in 2001 under the European Commission, Directorate-General Education’s e-Learning Action Plan:

- **cEVU – Collaborative European Virtual University** – to develop e-learning models and ideas for a European virtual university
- **DELOS – Developing a European e-learning Observation System** – to prepare for the establishment of an Observation System to accompany the e-learning Action Plan.
- **ELDA E-Learning Disability Access** – to develop a virtual community of learning for the disabled, granting them access to training via e-learning.
- **GENIUS – Generic e-Learning Environments and Paradigms for the New European Information and Communication Technologies Curricula** – to address the ICT skills shortage in Europe.
- **ILAB – A virtual laboratory for collaboration and problem solving for the training of teachers and trainers in e-Learning** – to enhance the uses and advantages of technological tools among researchers, trainers and teachers.
- **LIVIUS Learning in a Virtual Integrated University** – to create new organizational, psycho-pedagogical and didactic models for a European Virtual University.
- **MENU -- Model for a European Networked University for e-Learning** – to develop a European Networked (Virtual) University model.



- **Network for blind people** – to establish a European multimedia network, thus allowing the blind to access information available through data bases and the Internet.
- **ULEARN -- A European Lifelong Learning System on ICT in Education for Pioneer Teachers** – to create a community where pioneering teachers can share ideas.
- **3DeL -- 3D Electronic Learning** – to provide an e-learning format for courses in the field of 3D.

For further information on these projects, see: <http://europa.eu.int/comm/education/elearning/>.

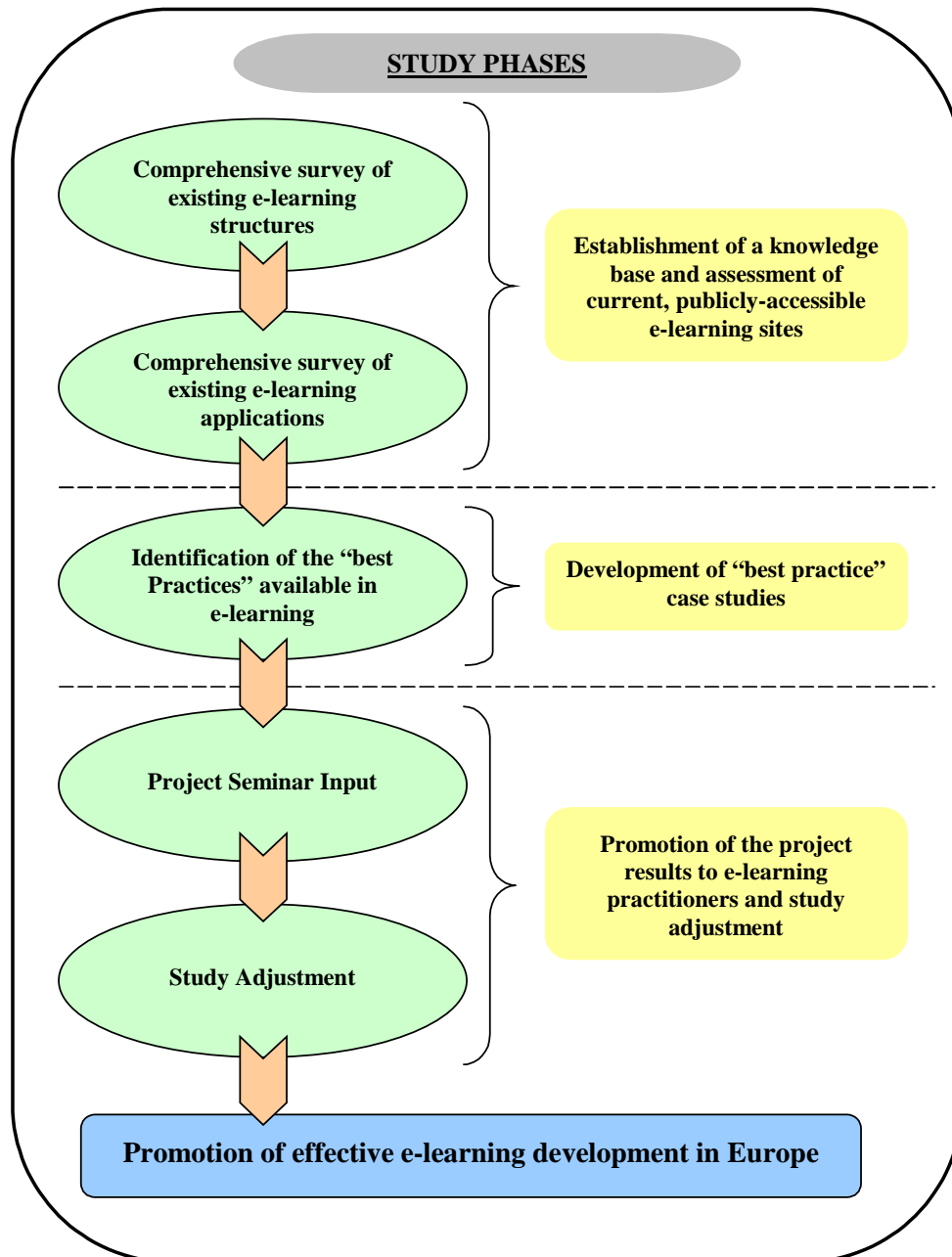
In September 2002 a Call was launched by the Directorate General of Education and Culture, which had a strong focus on the e-learning field.⁶ The objectives of this call were highly relevant to the work conducted within this study. One of the call's objectives was to develop a quality framework within the area of e-learning that would be accepted across the European Union. This implies establishing criteria that define the level of quality of an e-learning site.

This study's most challenging aspect was to develop a set of criteria that evaluated the e-learning sites on their effectiveness with respect to the research areas. This emphasis on developing a quality framework as shown by the IST Programme and the Directorate General of Education and Culture actions is an important advancement for the field to ensure effective learning applications and structures are developed. It is our hope that the work conducted within this study will provide assistance to the actions to be carried out by the projects supporting the Call of September 2002.

4. Presentation of the Work

The study's design broke the work involved into five specific phases, each establishing a basis to proceed to the next phase of the study. The intended final outcomes of this sequence include the application of best practices among e-learning providers, a significant contribution to Europe's competitive standing globally, individual betterment through education, and the promotion of e-learning in general. The phases of the project are illustrated in Figure 4.1, below.

Figure 4.1 Study progression



Several activities were involved in accomplishing each of these phases. Specific and relevant details of the work involved are presented in the following section of this study, including the decision-making process leading to subsequent activities.



It will become apparent through review of the following methodology that there are two activities that limited the evaluation and ultimately the study results to websites that best leverage search engines and commonly accepted English terms. This is due to the initial challenge presented to the project team of identifying and selecting e-learning sites. As discussed in section 6.2 – Reflections, the method applied of identifying e-learning sites through utilizing the leading search engines is possibly the only effective method. The strongest justification for utilizing the leading search engines is the following:

- Search engines are the most common method used by the general public for identifying Internet sites. This is inline with the project scope – “self-learning for work” as explained further in the following section.
- Leading e-learning sites have knowledge to leverage search engines and directories to attract end users.

Due to limiting the selection of e-learning sites to leading search engines and commonly accepted English terms the results of this study are a reflection of sites founded in mainly English speaking regions that include America and Britain. Even though 12,5% of the resulting sites were non English based or multilingual, this aspect of the study must be taken into account when reviewing the results at each stage of the methodology.

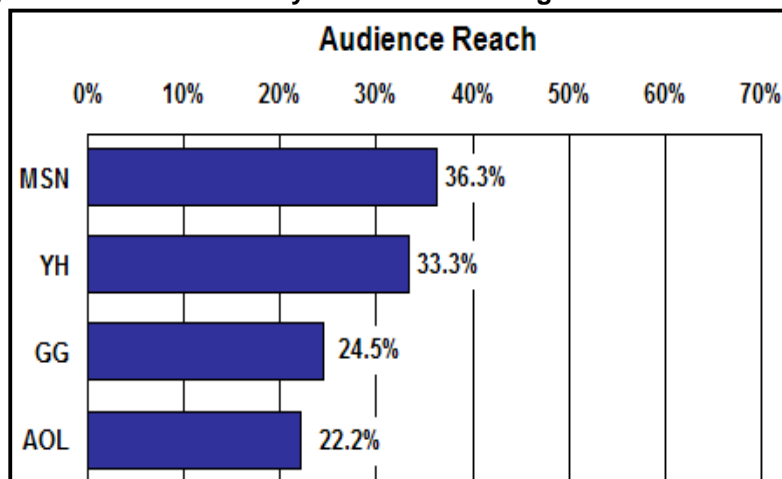
It is also important to keep in mind that due to the methodology applied well known and distinguished sites such as the United Kingdom Open University and Spanish Open University of Catalunya are not represented in the final pool of 40.

4.1 Selection of e-Learning Sites

In order for the study results to be of maximum benefit to e-learning practitioners within the European Union, it was decided that the initial analysis of e-learning sites should focus on currently utilized, and publicly available, practices in e-learning. This approach was taken for the analysis of structures and of applications.

Thus, the project began with an information search as to the most accessible existing sites. This search was approached from the perspective of finding those sites more easily accessible or visible to the general public – in other words, the sites that users would be most likely to encounter when searching for an e-learning provider. The justification for approaching the study with an assessment of what is available to the public is that the project's contribution falls under the category of self-learning for work. In order to proceed in a manner consistent with this approach, the first task was to determine which search engines are most widely utilized by the general public.

According to Jupiter Media Matrix's ratings for January 2002⁷ (see Figure 4.2, below), the leading search engines in terms of “audience reach” are: Microsoft Network (MSN), Yahoo! (YH), Google (GG), and America Online (AOL).

Figure 4.2 Most commonly utilized search engines

Source: Jupiter Media Matrix's ratings for January

The figures above indicate the findings on audience reach, which is roughly the percentage of Internet users estimated to have searched on each site at some time during the month of January 2002. A web user may visit more than one service; therefore the combined totals exceed 100 percent.

Once these search engines were identified, the e-learning sites most accessible to the public could be ascertained. The methodology for conducting the searches to find these sites consisted of accessing each of the four search engines and using "e-learning" as the sole search specification.

In this way, a standard search was made for each engine resulting in 200 possible sites. The results had then to be filtered based on the following exclusions:

- Exclude duplicated addresses.
- Exclude non-European or non North American.
- Exclude e-learning software providers.
- Exclude e-learning magazines or articles.
- Exclude all other non e-learning course providers.

The remaining sites qualifying as actual e-learning courses were then subjected to the survey and assessment.

4.2. Structures and Applications Assessment

The initial identification and screening of the sites resulted in a final pool of 40 sites to be included in the evaluation. For this purpose, a database was assembled, to organize all 'valid' websites. This was used as a foundation for the initial site evaluations with respect to *structures*, as previously referenced.

The evaluation of these sites was conducted based on a pre-determined set of criteria. The formation of this criteria list was based on previous analytical studies of e-learning practices, the experiences of the work team, and a common sense understanding of important characteristics of effective e-learning sites. The following two studies were the main sources used to define the specific criteria:



- A Framework for Comparing Web-Based Learning Environments⁸ – This document was developed by Mr. Pantel and submitted as his thesis for the degree of Master of Science in the School of Computing Science. He proposes a comparison framework for Web-based learning environments, which is based primarily on educational theory and human-computer interaction research. The comparison framework consists of a large number of comparison dimensions covering a broad range of issues relevant to the adoption of a Web-based learning environment.
- E-Learning Course Publishers: A Comparative Analysis and Industry Directory⁹ – The report provides a complete picture of the e-learning courseware landscape and assembles a full directory of courseware providers. The report includes a detailed look at the courseware available from each publisher, examples of the typical quality of their content; and, what is more pertinent to this study a set of criteria. The criteria are applied to a thorough evaluation of the courseware providers' instructional design and delivery methods.

The sites were evaluated from a learner's perspective without any prior correspondences with the respective sites' management with regard to the project team's intentions. This included accessing all relevant services and experiencing a full course or course sessions. The project team evaluators experienced the site's full capabilities which included all added value aspects and asynchronous training activities. The project team was limited with regard to its evaluation of synchronous activities due to schedule constraints of the respective activities. The resulting evaluations are from the perspective of the project team.

The assessment of structures took into account seven specific areas. The specifications of these areas, their criteria and method of ranking are outlined below:

1. Objectiveness of the Mission:

Is the site's mission clearly stated?

- 3 – The site's mission is clearly stated.
- 2 – The site's mission is explained, but not directly stated.
- 1 – The site's mission is not clear.

2. Unique design and structure of the interface:

Does an analysis of the site demonstrate an appropriately unique design and structure?

- 3 – Most of the general characteristics are unique.
- 2 – Some of the general characteristics are unique.
- 1 – None of the characteristics are unique.

3. Aesthetics of the website:

Is the site aesthetically interesting and attractive?

- 5 – Very interesting and attractive.
- 4 – Somewhat interesting and attractive.
- 3 – Moderately interesting and attractive.
- 2 – Minimally interesting and attractive.
- 1 – Neither interesting nor attractive.

4. Usability and Navigation:

Is the site easy to use and to navigate?

- 5 – Very easy to use and to navigate.
- 4 – Somewhat easy to use and to navigate.



- 3 – Fairly easy to use and to navigate.
- 2 – Not very easy to use and to navigate.
- 1 – Difficult to use and to navigate.

5. Adaptability to the web:

Is the course adapted to the web or simply an online written document?

- 5 – The course is completely adapted to an online environment.
- 4 – Most of the course is adapted to an online environment.
- 3 – Some of the course is adapted to an online environment.
- 2 – Little of the course is adapted to an online environment.
- 1 – None of the course is adapted to an online environment (i.e. the course consists of posted online documents in traditional supports - books, papers, etc.).

6. Appropriateness of the Courses structure:

Is the course structure correctly adapted to its content and objectives?

- 5 – The structure of the course is highly adapted to its content and objectives.
- 4 – The structure of the course is somewhat adapted to its content and objectives.
- 3 – The structure of the course is fairly adapted to its content and objectives.
- 2 – The structure of the course is minimally adapted to its content and objectives.
- 1 – The structure of the course is not at all adapted to its content and objectives.

7. Support availability:

Is appropriate user support offered through the website?

- 3 – Full user support is available through the website (including contact information, a call centre and e-mail address).
- 2 – Moderate user support is available through the website (e.g. contact information or a call centre or an e-mail address).
- 1 – No user support is available through the website.

With these criteria, each of the e-learning sites that had been identified was subjected to a thorough analysis of its *structure*. The scoring of sites was accomplished through calculating the sum of their scores under each evaluated area. The result was a ranking of the sites, thus indicating which have applied the most appropriate structures, according to the specified criteria. This ranking is displayed in Annex 1 – Structure Assessment Results. An “e-Learning Innovative Structures Study” document detailing this activity and the top 5 e-learning sites was submitted to the European Commission in partial fulfilment of the Innoelearning project.¹⁰

The assessment of applications took into account four specific areas. The specifications of these areas, their criteria and method of ranking are outlined below:

1. Technological characteristics:

What is the degree of technological application in the presentation of the course? (e.g. audio, video, animations, whiteboards, charts, etc.)

- 5 – The course makes use of five or more technological applications.
- 4 – The course makes use of three to four technological applications.
- 3 – The course makes use of two technological applications.
- 2 – The course makes use of one technological application.



- 1 – The course makes use of no technological applications (i.e. the course is based on normal html pages).

2. Degree of interaction with other learners:

What is the degree of interaction allowed with other learners?

- 5 – The course allows for synchronous interaction via audio/video.
- 4 – The course allows for synchronous interaction via chat.
- 3 – The course allows for asynchronous interaction via forums.
- 2 – The course allows for asynchronous interaction via e-mail.
- 1 – The course does not provide for any interaction between learners.

3. Degree of interaction with a tutor:

What is the degree of interaction allowed with a tutor?

- 5 – The course allows for synchronous interaction via audio/video.
- 4 – The course allows for synchronous interaction via chat.
- 3 – The course allows for asynchronous interaction via forums.
- 2 – The course allows for asynchronous interaction via e-mail.
- 1 – The course does not provide for any interaction with a tutor.

4. Pedagogical tools:

To what extent are pedagogical tools (e.g. exercises, quizzes, etc.) applied in the course?

- 5 – The course makes use of a broad range of pedagogical tools.
- 4 – The course makes use of several pedagogical tools.
- 3 – The course makes use of a moderate number of pedagogical tools.
- 2 – The course makes use of a minimal number of pedagogical tools.
- 1 – The course makes use of no pedagogical tools.

Due to the consistency in the activities required under the first two phases of the study, the initial evaluations required by these phases were conducted simultaneously. The analysis of *applications* included an evaluation of the individual site's modules, classroom simulation, and applicability to various subject matter and learning objectives. Key characteristics that were considered in the evaluation included uniqueness, effectiveness and applicability. The evaluation and ranking of the application aspects of sites followed the same methodology outlined above for the evaluation of structures. Once again, this resulted in a ranking of the sites based on the specified criteria for applications. This ranking is displayed in Annex 2 – Applications Assessment Results. An "e-Learning Innovative Applications Study" document detailing this activity and the top 5 e-learning sites was submitted to the European Commission in partial fulfilment of the Innoelearning project.¹¹ This was the second and final part in the initial evaluation of publicly accessible, existing e-learning sites.

From this stage the study moved into a further examination of the top sites. Accomplishing this required a combining of the two rankings into one. As these two rankings were compiled based on the same set of sites, all sites were listed in each ranking, but naturally they were not necessarily ranked in the same order under both categories. Because the project team viewed structures and applications in e-learning to be of equal importance, a weight of 50% was attributed to each ranking.

The two rankings were compiled based on the sum of the weighted totals with respect to the structures and applications criterion. The resulting top 20 e-learning sites are identified in the Presentation of Results section with short summaries.



4.3. Best Practices Assessment

With the conclusion of the previous two phases, the project was positioned to move into a more detailed analysis of the sites, which resulted in the highest ranking. Due to the initial analysis, the study was able to now focus with greater precision on the characteristics that make up best practices in e-learning.

In order to achieve this, it was necessary to identify the sites that were determined to utilize “better” practices, and subject them to further evaluation under a more specific and in-depth set of criteria. These criteria specifically pertain to the objective of identifying best practices in the areas of:

1. Learner models – flexible, personal models for learning,
2. Soft skills and informal learning – supporting the learner to develop soft skills (i.e. interpersonal communication, team work, leadership, and project management) through the sharing of knowledge, dynamic learning content generation, etc., and
3. Communities of learning – support for the identification and implementation of virtual communities, involving individuals with similar learning needs, within and across organisational boundaries.

These were set forward as priorities by the European Commission – the study’s sponsor – as previously acknowledged. It was this selection of priorities that framed the criteria selection for the second round in the analysis of sites.

Having completed extensive research of the industry, and following a thorough review of current and historic issues in e-learning, the project team developed a list of criteria relevant to best practice characteristics. Criteria were developed for each of the three areas listed above.

The criteria that were established for the evaluation of Learner Models – the first of the three best practice areas – represent a broad range of added value tools and application that directly or indirectly assist the provider and/or learner in adjusting the learning experience to the learner’s capabilities, learning goals, and preferred learning environment; therefore, the study attempts to assess the overall level of personalized learning experiences to facilitate the learner’s education and ensure his success in grasping the content of a given course. Following is a brief description of each criterion selected to evaluate the Learner Models area:

1. *Skills gap analysis*¹⁴ – In order to ensure the practicality of taking an e-learning course, the learner must first know that they will have something to gain by doing so. Thus, it is necessary that their skill level is evaluated prior to taking the course – in other words, a “skills gap analysis” is completed. Through testing the learner first, the course provider will be able to determine what is lacking in the knowledge base of the learner, and the learner will be aware of what areas they need to strengthen. By providing the learner with the option of completing an examination in a subject before taking the course, the time they spend in an e-learning course can be optimised by focusing on their weaker areas, thereby taking into account the learner’s capabilities, commitments, and learning goals.
2. *Tutor availability*¹⁴ – While various forms of distance learning are currently practiced, it is naturally and generally conceded that autonomous learning is less effective than learning supported by skilled and knowledgeable individuals. The availability of a tutor, or instructor, to answer questions when needed, clarify particular issues or provide the learner general guidance, is considered essential. The tutor support adds to the aspect of personalized learning by providing more



direct real-time interaction with the learner, thus allowing for learning at the learner's potential capability and meeting his specific learning goals.

3. *Learner flexibility*¹⁴ – Among the advantages associated with e-learning is that it lends itself to learners who would otherwise be unable to attend classes. Additionally, student learning through this medium can offer learners a range of options not available through traditional classroom learning. This pertains particularly to flexibility in scheduling and subject of study.
4. *Control of screen information*¹² – Associated with the question of learner flexibility is the more specific issue of allowing learners to manage and control what they view on their screens while taking a course via e-learning. A greater amount of learner control in this area allows learners to tailor their e-learning experience to their preferences, and reflects the provider's interest in maximizing e-learning's potential and in making the learner's learning experience enjoyable.
5. *Defined objectives*¹² - As a question of the organization and administration delivered by the provider, the issue of objectives is paramount, specifically in the two following aspects.
 - a. *Performance* – As with most traditional forms of learning, learners must be notified of how the education will benefit them. In other words, they must be made aware of what it is they will learn, and what they will be able to do once they have learned it. This allows the learner to manage his learning experience to support his learning goals.
 - b. *Standards* – Similarly, learners taking a course should be advised of what performance standard they will be held to. Particularly if learners are obligated - by an employer or educational institution - to perform under a pass/fail system, the acceptable level of performance (e.g. examination grade) should be explicit. This will also allow the learner to have a greater understanding of the overall course goals and to ensure his personal learning goals are achieved.
6. *Self assessment*¹⁴ – In order to remove ambiguity and allow learners to be personally involved in their learning it is important that they are able to monitor their progress. In this respect, the option of self-assessment is desirable, allowing learners to gauge their grasp of a subject studied, and repeat particular sections if necessary. Such assessments can normally be included periodically, at the conclusion of sections or modules in a given subject.
7. *Content integration*¹⁵ – To grasp and hold the interest of learners, it is important that learner models integrate subject matter with various mediums. The technologies available through e-learning include streaming media, slideshows, e-books, etc. These can be used in ways traditional forms of education could not, thus enhancing the effectiveness and personalization of the e-learning experience.
8. *Document management*¹⁵ – The effort to deliver effective and personalized education is reflected in the sources of support made available to learners. The use of documents external to course material is often drawn on as a secondary and complimentary source of information on a course subject. This gives learners the guidance and ability to delve deeper into subjects that interest or concern them, and makes for a more comprehensive and personalized learning experience.
9. *Help facilities*¹² – In applying current technologies to education, it is expected that learners will encounter new and unexpected complications. In addition to issues related to learning, other concerns or problems may arise. Providers of e-learning should offer users the ability to access help facilities where they can get expert assistance on a variety of issues. This goes beyond the availability of a tutor, and



can include providing a phone number, e-mail address, and links to web pages or other services to learners to answer any question they may have, and at any time. Thus further supporting the learner's personal learning needs and capabilities.

10. *Simple user interface*¹² – An effective e-learning experience should minimize peripheral distractions or frustrations. It should allow learners to easily access information and concentrate on their subject of study. In this respect, the ease of navigation and clarity in accessing an e-learning site, and applying the learning tools or available aides, is a basic necessity in learner models, and is the final criteria associated with this area of e-learning's best practices.

The criterion that were established for the evaluation of Soft Skills and Informal Learning – the second of the three best practice areas – relate to the attainment of interpersonal communication, management and personal interaction skills by learner. This was assessed by way of the level of interaction promoted by a given site through the tools utilized. Interaction in this sense refers to communication between learners and their instructors, and between learners and other learners. Following is a brief description of each criterion under Soft Skills and Informal Learning:

1. *Activity*¹² – Effective education and training makes use of guided and practical hands-on exercises to complement lectures and reading. This gives learners the realization of the pragmatic application of the subject outside the classroom.
2. *Reward*¹² – As with other human endeavours, including traditional classroom training, gaining recognition for one's efforts and achievements is essential. Providers of e-learning should be cognizant of this need, and provide their learners with appropriate recognition and reinforcement for successful efforts or contributions. This can take various forms, including the public posting of grades, issuance of certificates or diplomas, or other honours and awards.
3. *Transfer*¹² – For learners to grasp the "real world" application of their course, any provider of education should make apparent the application, or transfer, of the subject of study to the learner's current or future experience. E-learning, educational providers are granted a great deal of flexibility in making the transfer of subject matter clear. This is limited only by the provider's ability to creatively apply available technologies to deliver real world examples or scenarios to their learners.
4. *Environment*¹² – To ease the burden of completing coursework and to facilitate learning, a learning environment should be comfortable and supportive. Though the physical environment e-learners are educated in is subject to their individual surroundings, providers determine the online environment. In this sense, they are responsible for ensuring their sites offer adequate support, tolerance of errors, appropriate feedback, and freedom of expression where appropriate; and learners trust they will be respected and encouraged if they contribute ideas and/or comments.
5. *Communication interactivity*¹³ – As the acquisition of "Soft Skills" and informal learning, as defined in the beginning of this section, are dependent upon interaction at the learner-to-learner and learner-to-instructor levels, communication interactivity is a necessary criteria. In this respect it is imperative that such interaction is not only presented as a priority by an e-learning provider, but is realized by learners in their courses of study.
6. *Motivation*¹² – A clear prerequisite to effective education is the motivation of the learner to grasp the subject at hand. While this can be linked to the personal attributes of the learner, the educational provider should make apparent the need to learn. Motivation can simply take the form of an explanation to the learner of the need or benefit of learning, and can include rewards or other incentives. In this way, this criterion is closely related to the second criteria (*Reward*).



7. *Learner centred*¹² – Providers of e-learning have potential that classroom instruction cannot offer to serve the needs of learners in innovative and creative ways. It is imperative that the learner has the ability to take advantage of the option of e-learning through having decision-making power on the depth and scope of their learning, their schedule, their contribution, etc. The learner-centeredness of the e-learning format is the final criterion of Soft Skills and Informal Learning.

The criterion that were established for the evaluation of Communities of Learning – the third and final of the three best practice areas – relate to supporting the formation of online learning communities. Allowing learners to interact and participate in a community, involving individuals with similar learning needs, within and across organisational boundaries, allows for a richer and more fulfilling learning experience. Following is a brief description of each criterion under Communities of Learning:

1. *Clearly stated purpose*¹³ – The first component of establishing and directing a community of learning is a stated purpose. This reflects the provider's emphasis in this area, and establishes the foundation upon which communities of learning are developed. Providers of e-learning which hope to develop strength in communities of learning must set forward their purpose, and/or their guiding principles, and must provide information on their communities, direction on how to participate, communication and conferencing tools, organization of relevant information contributed by the community, etc.
2. *Experienced moderators*¹³ – As with the *Tutor Availability* criterion of Learner Models, the contribution, guidance and oversight of experienced moderators are critical to communities of learning. They serve to ensure that communities are functioning properly through initiating interaction, guiding discussions – preventing them from wandering into irrelevant issues, giving feedback, and a source of support to community members.
3. *Registration system*¹³ – A basic component of fostering community development and their interaction is providing learners with tools to present themselves to other community members. This is typically done through a registration system, in which learners have control over what information other learners can see. Registration systems can allow learners to post a variety of information, which may include e-mail addresses, photos, personal profiles, etc.
4. *Synchronous tools*¹³ – There are many tools that can be made available to communities of learning in order to support their communication and interaction. Of these some are more conducive to interaction than others. The more valuable are *synchronous tools*, which allow community members to interact in real time. These can include chat rooms, discussion boards, virtual meetings, teleconferencing and videoconferencing.
5. *Asynchronous tools*¹³ – Though not as ideal for quick communication, but no less important for communities, are *asynchronous tools*. These are those that allow for communication, albeit delayed. Asynchronous tools can include e-mail, quizzes, assessments, and message posting on web forums. Some of these, and particularly e-mail, have become standard tools for staying connecting to virtually all types of communities.
6. *Group problem solving*¹⁴ – Because education pertaining to management and interpersonal communication skills is well reinforced through learners working together, *group problem solving* is an important aspect of e-learning communities. The e-learning tool offers new opportunities for learners from dissimilar backgrounds, cultures and physical locations to interact. Collaborating on project development or problem solving can be a valuable part of the educational process.



7. *Calendar*¹⁵ – While a learner's progress through a course of study may be at their own discretion, a calendar serves as a valuable component in promoting a community of learning. In this way learners are made aware of online events such as discussions and forums on specific topics. The presence of organizational tools of this nature confirms a provider's commitment to supporting effective communities of learning.
8. *Level of interaction*¹³ – Though an e-learning provider may offer many tools, and possess the ingredients necessary, to promote communities of learning, they fall short in this area if their learners are not involved in such communities. Thus, the real level of interaction is clear evidence of the existence of actual communities, and is the final criteria under the area of Communities of Learning.

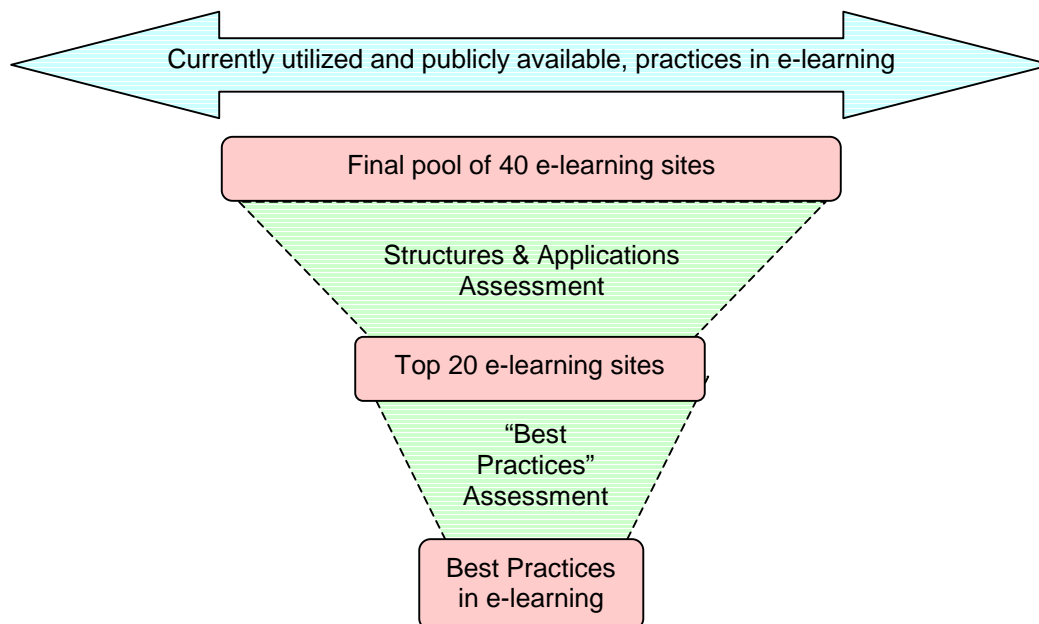
Subsequent to developing this criterion, the project team conducted individual in-depth analyses of the top twenty sites based on the criteria for each of the three areas. The analyses included: interacting with instructors through the available respective site tools; attending courses; and utilizing a majority of the site added value aspects, such as the help functions, chat rooms, and synchronous sessions when possible. The project team attempted to acquire additional information, such as actual number of learners per course, through a detailed questionnaire. Unfortunately, the response rate was extremely low and there was a great deal of reservation by the site representatives to the project team's more detailed inquiry. Each site was assessed in terms of each of the three areas, and a final scoring and ranking established.

The results of this analysis are presented in the following section of this study. The top three sites in each area, as established by this ranking, were thus determined to be the best practices currently being applied. The characteristics of these sites are presented in the presentation of results section.

5. Presentation of the Results

The study results are presented in two phases, which correspond to the work conducted and detailed in the previous section: the selected top 20 e-learning sites and the selected best practices in e-learning. The progression of results is illustrated in Figure 5.1.

Figure 5.1 Progress of study results



5.1. Top 20 e-Learning Sites

Following the assessment of sites, and the compiling of the first two rankings – both for structures and for applications – a single, complete ranking was compiled, as previously mentioned. This was based on the sum of the weighted totals with respect to the structures and applications criterion, and served as a basis for narrowing and deepening the study into e-learning's best practices.

From this single ranking, the top 20 sites were reviewed and summarized in order to assess the characteristics of the best sites evaluated at this point. These would then move on to a subsequent and more comprehensive evaluation to ascertain their fit with the best practices criteria. The rankings of the top 20 sites are presented in Table 5.1 below.

Table 5.1 Top 20 e-learning sites

Site	Search engine	Placement in search results	Project evaluation ranking
eLearning Centre	msn	5	1
SmartCanal	aol	42	2
DigitalThink	aol	5	3
Element K	aol	35	4
Eno	msn	6	5
Private Lessons Channel	msn	18	6
SkillSoft / Smart Force	aol	12	7
ICUS	yahoo!	16	8
Center for Interactive Financial Training	msn	11	9
Learn2	msn	3	10
OnlineExpert	yahoo!	24	11
KnowledgePool	yahoo!	14	12
NETg	yahoo!	18	13
SyberWorks	aol	20	14
EasyCanDo	msn	9	15
MindLeaders	aol	11	16
VCampus	aol	30	17
Online-learning	msn	46	18
Global Knowledge	msn	26	19
ActiveEducation	aol	39	20

The review and summaries of each of these sites are presented below. These summaries provide a brief introduction to the site and its strong aspects.

1 – eLearning Centre

www.e-learning-centre.com



The eLearning Centre (ELC), together with its sister company, Visual Software Training, has been involved in the provision of Information and Communications Technology (ICT) distance-learning training programmes since 1994. The centre specialises in interactive, multi-media website design training programmes aimed at a wide range of skill levels.

ELC has developed an interesting platform that integrates a virtual-reality 3-D e-Learning Centre. ELC platform can enhance sharing of information on the Internet using data integration, audio, and video capabilities - resulting in more flexible and dynamic communications.

ELC ranked well with regard to the criteria “degree of interaction with other learners”, and “degree of interaction with a tutor”. This was due to the offering of a virtual classroom. The virtual classroom is an integral part of the e-Learning Centre technology platform. Here learners may participate in a tutor-led class at their own PC and receive instructions directly from the tutor in real-time over the Internet. The participants receive real-time audio from their Instructor and real-time course presentations via support software.

The integrated User Forum enables the course participants to assist one another, find solutions and share their experiences. The User Forum can also be used for asking open questions to other learners thus allowing individual learners to benefit from the group’s gained



knowledge. The learner is also encouraged to take a pre and post test to assess their knowledge in the subject area. This provides immediate feedback that can be very effective if used in a positive format.

2 – SmartCanal

www.smartcanal.com



SmartCanal, develops and manages virtual training centres containing: specified contents, standard contents, virtual classrooms and Learning Management Systems. The site offers more than 600 courses in several subjects, including IT, language, finance, and management. The platform used by SmartCanal includes three areas of particular interest for the Innovative Applications Study: the virtual class (classe virtuelle), the virtual centre of resources (Centre de ressources virtuel), and a virtual university (Université Virtuelle).

The virtual class supported by Learnlinc (www.learnlinc.com) provides live Internet learning. The virtual class includes several synchronous and asynchronous learning technologies with the capability of live video or audio contact between learners and trainers. The synchronous sessions include functions such as chat, “whiteboard” and audio questions from learners. This application enabled SmartCanal to classify well in the second and third criteria: “degree of interaction with other learners” and “degree of interaction with a tutor”.

The virtual centre of resources integrates several different courses that utilize multimedia technologies and provide an interactive and attractive learning environment. These courses include different pedagogical tools such as games, quizzes and exercises.

The virtual university utilizes the previous two areas of interest and applies a Learner Management System. Through this application SmartCanal provides its clients the opportunity to structure a learning curriculum that meets their needs. The Learning Management System applies the current industry accepted standard services such as inscription management and learner performance tracking.

3 – DigitalThink

www.digitalthink.com



DigitalThink's primary focus is e-learning business solutions. DigitalThink also offers other courseware delivery options, including corporate intranets. DigitalThink combines self-paced content with collaborative tools. Learners can communicate with each other through DigitalThink's internal email system. Learners also have email access to a tutor if they have a problem understanding a topic or an exercise.

With DigitalThink, learners can enter an online community of experts and peers, increasing their involvement, keeping them engaged and focused. In addition to interacting with other learners via email or instant messaging, they have access to expert tutors who provide personalized feedback on their work, answer questions, and offer guidance. These aspects enabled DigitalThink to classify particularly well in the second and third criteria: “degree of interaction with other learners” and “degree of interaction with a tutor”.

With regard to pedagogical tools, learners can perform hands-on exercises upon completion of specific modules. After completing an exercise, the learner can receive an explanation of each step, including those completed incorrectly or missed altogether. Quizzes are utilized to provide real-time feedback.



4 – Element K

www.elementK.com



Element K has more than 20 years of experience in the education and training market. The company has created a Learning Management System (LMS) to provide powerful management and reporting tools. The LMS offers a range of course and learner management options that include assessments and reporting tools. The system is flexible, which allows for easily customized courses, student learning paths, and reporting to meet training objectives.

Element K's courses can be Instructor-Led or Self-Study oriented. For the purpose of this study particular attention was placed on the Instructor-Led courses. Each lesson contains the following topics: overview, assignment(s), quiz and quiz answers. The pedagogical tools used are designed to guide and give structure to users learning objectives. In order to progress through the course, it is required to complete each action. Since the instructional design of Element K's courses relies on simulations, there is a high degree of interactivity; thus translating to an effective training tool. Element K also incorporates particularly interesting technological applications such as a very useful optional audio soundtrack.

Particularly interesting is the fact that while a class is in session, there is a related General Student Discussion Area where learners can discuss topics not directly related to classroom instruction. The General Student Discussion Area is designed to give learners a place to discuss, with other learners, topics that are not directly related to the course but where there is a shared interest.

Also a highlight is the Student Introduction Discussion area where learners can get to know their classmates. They can introduce themselves or read other's introductions. These discussion areas with their added value aspects enabled Element K to rank higher than similar sites with regard to the following criteria: "degree of interaction with other learners" and "degree of interaction with a tutor".

5 – Eno

www.eno.com



Eno's e-learning solutions are designed to integrate multimedia, instructor-led, and real-time learning techniques into a facilitated, collaborative learning environment. Eno creates an individualized learning community for organizations and individual learners. A course can contain a range of learning events such as: seminars (live and pre-recorded), expert led chats, library of relevant downloads, assessments (prior and post), and open forums.

Eno ranked high with regard to the applications criteria. The site applies significant technological aspects with an emphasis on video and audio. The ability for learner interaction with trainers, subject matter experts, and other learners is high with actual activity taking place. The site also ranked well with regard to its "adaptability to the web" and its "usability and navigation". In general the site applies a range of effective tools in a well-structured environment.

6 - Private Lessons Channel

www.privatelessons.net



Digital Directions International's Private Lessons Channel is an e-learning portal offering a variety of engaging, easy-to-use and interactive lessons in the areas of personal enrichment and career development.



The site received high marks due to its simple, yet engaging layout. The site is user-friendly and interactive which classify particularly well across the criteria considered in this study. Due to the site's single, straightforward mission, the user is able to navigate to the key web pages with ease. One clear example of this is the site's vertical menu, which consists of the seven categories of content. This structure allows the user to access a list of courses pertaining to a specific subject from any point within the website. The "Start" web page is particularly effective since it takes the user through the key aspects of the site: sample course, registration, downloadable software, feedback, and relevant events.

The course interface is easy to use and consists of a slide show presentation with text and clip-art photos. There are a few interactive elements, including pop-up text boxes, considerable animation, and "RolePlay" quizzes. The major point of differentiation of Private Lessons Channel's course design and the design of other publishers is the company's use of effective and engaging illustrations.

7 – SkillSoft/SmartForce

www.skillsoft.com



SmartForce has merged with SkillSoft during the course of this study. Therefore, the e-learning site representing the merger was evaluated as discussed in more detail within the SkillSoft best practice case study. The SkillSoft e-learning platform contains a vast array of courses. The course modules combine text, graphics, animation, audio, questions, and exercises to create an effective, highly interactive learning experience for the learner. SkillSoft courses conduct their assessments with variations on traditional multiple-choice and fill-in-the-blank exercises. They provide instant feedback for answers, and also offer periodic questions within courses.

The extent to which rich graphics, animation, and audio is used depends on the material under discussion. For example, animation and audio are typically used for introductory, end-user oriented learning content while the more technical modules employ mainly text and graphics. The course platform also offers a "scratch pad" feature that allows taking notes and also automatically copying course text from the screen.

Learners can also follow links to supplementary resources such as websites, articles, events, activities, downloads, recommended reading lists, research projects, learner guides, and glossaries. Lessons are used in a variety of learning situations ranging from the explanation of concepts and theories to the demonstration of software interfaces. There are several technologies working together in the same module in order to obtain motivating and interactive learning tools. In general, this site applies some unique aspects utilizing an array of applications that enable a high ranking with respect to the other sites.

8 – ICUS

www.icus.net



ICUS develops e-learning courses based on interactive discussion groups, online seminars and business case simulations. Through online coaching and collaboration, participants interact regularly with fellow learners through e-mail and interactive chat rooms facilitated by online coaches. As learners continue to learn and work, they receive feedback and ideas from other learners online, which they could actively incorporate at work. Learners can also continue the interaction following their graduation from ICUS – thus maintaining the ability to share and exchange views online with the learning community.

The ICUS site is well adapted to the web and ranked well with regard to "usability and navigation". The site applies a range of technologies as discussed above focused on fostering asynchronous interaction with the learners. In general, the course structure is effective.



9 - Centre for Interactive Financial Training

www.cift.org



The Centre for Interactive Financial Training (CIFT) is a training organisation dedicated solely to the training needs of banks and the financial sector in general. Having developed a reputation in instructor led training, CIFT is offering integrated / blended online learning.

The CIFT in-house courses, CIFT public training and online solutions can all be tailored to meet particular business needs. Learners initially go through a series of questions and testing to evaluate their individual levels, and thus formulate an appropriate training path. The site is well structured and user friendly. The site design and use of graphics keeps the user's interest. In general the site ranked in the middle of the top 20 sites with regard to its structures and applications.

10 - Learn2

www.learn2.com



The Learn2 courses are organized to provide training in targeted fields, including desktop applications, IT technology, and business and professional development. The site offers delivery options for the courses and supports AICC and SCORM 1.2 standards. Learn2's hosted e-learning environment is called Learn2 University. The Learn2 University supports the standard tracking and reporting on learner progress.

The courses utilize a range of technologies, above the average site, but the interaction capability with the learner and between learners is limited. The site is well adapted to the web.

11 – OnlineExpert

www.onlineexpert.com



LearnKey, the owner of OnlineExpert, delivers an array of learning products including video and CD-ROM. The company has specialized in self-paced content and delivery systems over the past thirteen years. LearnKey's e-learning site integrates into one all of the products that LearnKey has developed and introduced worldwide.

The site utilizes a range of technologies and pedagogical tools such as exercises, quizzes, and simulations. As seen in previous sites, OnlineExpert adapts well to the web and has user friendly aspects, but does not rank well with regard "degree of interaction" with learners and between learners. Mainly for these reasons, the site ranks in the second half of the top 20 sites.

12 – Knowledge Pool

www.knowledgepool.com



KnowledgePool is a training provider with over 35 years of experience in designing and delivering training solutions for clients worldwide. KnowledgePool claims to be a pioneer in e-learning, stating that in 1995 the company became the first in the world to deliver live, interactive Internet-based training.

KnowledgePool develops and delivers a mix of off-the-shelf and award winning custom-built e-learning courses and training programmes. The classes - covering a range of subjects, including management, communication, finance and other business skills - last about 90 minutes each. Courses are highly interactive with video clips, voice-over and regular testing, and are developed by a panel of subject-matter experts.



KnowledgePool's Live Mentoring Service provides the human element to technology-based training by enabling users to gain continual live access to specially trained online tutors. The KnowledgePool tutors are able to answer questions in real time through a live chat feature. For the above stated reasons, KnowledgePool ranked well with regard to applied technologies and user friendliness aspects.

13 – NETg

www.netg.co.uk/



NETg is a Thomson Learning Company solution. The site contains several service items yet is very easy to navigate. The NETg courses make frequent use of simulation exercises, and cover functions in step-by-step explanations.

NETg's simulations are a strong point. They reinforce course concepts nicely, and offer engaging interactivity. The interface is also engaging. The user is allowed to choose the order in which he or she completes the various elements, and navigation is simple and intuitive. In some occasions the simulations consist of a single person answering questions chosen by the user from a provided list. There is a main menu, from which the user can access each chapter of the course. A help button, detailed table of contents, print option and exit button are accessible by the user at all times. Within each section, navigation buttons are clearly labelled. The optional audio track is very useful and an important feature. The ability to change the font size allows the user to minimize the strain on the eyes and is an added value option.

14 - SyberWorks

www.syberworks.com



SyberWorks e-learning courses are highly interactive, making use of video, audio, simulations, activities, quizzes, and more. The company has served a variety of industries, including healthcare, manufacturing, financial services, telecommunications/technology, government entities, and small businesses.

The site ranks well with regard to adaptability to the web. The courses apply structures that are pedagogically effective with regard to the specific subject matters. The use of pedagogical tools and other technology specific aspects of the site justifies the site's high ranking with regard to technological characteristics.

15 – EasyCanDo

www.easycando.com



EasyCanDo by FutureMedia provides a simple way for businesses to deliver online training to employees, partners or customers. Through collaborating with international partners, EasyCando provides a range of e-learning products and services. The EasyCanDo site features a live web-based conferencing and collaboration tool.

EasyCanDo is based on the Solstra Learning Management System. Solstra enables designated managers to assign, manage, track and report on online training across business units, departments or an entire enterprise. The site ranked 15th in its use of applications due to a low degree of interaction with learners and use of tutors; although, the site is structured well with a high degree of usability and adaptability to the web.



16 - MindLeaders

www.dpec.com

MindLeaders' e-learning courses are directed at a variety of training needs and learner groups, including serving major corporations, small businesses, government agencies, non-profit organizations, and home office users. The e-learning platform provides real-time access to subject-matter mentors. Learners can use Instant Mentoring to clarify concepts, fine-tune solutions, confirm a process or simply seek assurance that they understand an application. Additionally, more than 100 different exams are available. End user assessments include core and expert exams for Microsoft Office 2000 applications.

MindLeaders uses SALSA as a skill assessment tool. It quickly and comprehensively measures skills against industry benchmarks. SALSA allows avoidance of peripheral concerns, and gives an immediate and focused evaluation of a person's skills. The site is well adapted to the web and utilizes a range of technologies.

17 - VCampus

www.vcampus.com/

VCampus develops module-based courses that meet educational needs through a collaborative development process. The company incorporates interactivity, multimedia, animations, and simulations to build engaging modules. VCampus claims a course library of more than 3.500 web-based courses.

The site utilizes a complete Learning Management System that enable clients to easily manage the enrolment, registration, tracking, testing, grading, administration and certification of learners. Due to the technologies utilized this site ranks high with regard to technological characteristics and pedagogical tools. The site is also well structured with regard to adaptability to the web and user-friendly aspects.

18 - Online-learning

www.online-learning.com

Online-learning has been in operation since 1996. The company's the founders have been involved in distance education for two decades. Online-learning.com offers mentor-based courses aimed at people interested in becoming electronic content authoring professionals. The site also offers courses in professional technical writing, document usability testing and a variety of XML related courses for authoring professionals who need to build single-source documents.

The site is structured well and ranks high in usability and navigation. The courses apply structures that account for the relevant subject matter. Similar to the previous sites, Online-learning is well adapted to the web and utilizes a range of technologies.

19 - Global Knowledge

www.globalknowledge.com

Founded in 1995, Global Knowledge now offers more than 700 courses in 21 countries and in 13 languages. Global Knowledge's Blended Learning Solutions combine virtual classrooms and self-paced e-learning with traditional hands-on classroom learning.

Global Knowledge applies asynchronous and synchronous technologies, which utilize shared white-boards. The site ranked well with regard to the use of technologies such as audio and video, but ranked low with regard to interaction with the learner and between learners due to



implementing only asynchronous communication applications such as email. The site ranked above average with regard to adaptability to the web and user-friendliness aspects.

20 –ActiveEducation
www.activeed.com



ActiveEducation supports online courses for individual users and organizes courses specifically for its company clients. The site provides content development training and personnel application software training as part of a range of subject specific courses.

In general, the site is well adapted to the web with a certain level of user-friendliness. It ranks extremely low with respect to the degree of interaction with other learners; although, the courses apply an appropriate structure with some pedagogical tools and the applied technologies meet an above average level when compared to the other sites.

5.2. Best Practice e-Learning Sites

The top 20 e-learning sites were evaluated on three sets of criteria as described in detail in the section – 4.3 Best Practices Assessment. The evaluations for each of the sites were discussed until a consensus could be reached among the members of the project team. The nature of the criteria varies, and thus it was evident that some criteria should be scored in a quantitative nature, while others demanded a qualitative score. In other words, some would require simple “yes/no” scoring – such as the use of a calendar – which would receive a value of 1, for yes, and 0, for no, while the appropriate scoring of other criteria would be the assignment of a value from a range of numbers (a scale from 1-50) based on the project team’s experience with the site and comparison with other sites.

The values that were established were then attributed weights, thus ensuring the items contributed to the final scores of each of the three best practice areas in a manner proportionate with their assigned values. Table 5.2 on the following page illustrates the values and weights used in the scoring of each of the pre-described criteria.

In order to ensure consistency in the evaluation process, the first evaluation was completed as a test, wherein the project team members completed individual evaluations and then discussed and compared their results. Through this process questions concerning specific criteria and scoring were resolved. This test also resulted in the addition of “*Tutor Availability*” to the Learner Models best practices criteria, as it was decided that the availability of a tutor was a valuable component of Learner Models, while remaining separate in function from moderators who oversee communities of learning – the second criteria of Communities of Learning.

As shown by Figure 5.1 – Progress of study results, the identified top 20 e-learning sites were the basis for the best practices assessment. Each of the sites were evaluated based on their adherence to the pre-determined criteria, discussed above and illustrated in Table 5.2 below. The result was the development of three rankings – one for each of the three best practice areas as determined by the European Commission. Every site evaluated was placed in each of these three rankings, based on their scoring in the respective areas. In other words, three scores were assigned to each site and three separate and independent rankings were established. For instance, “site X” may have ranked 1st for Learner Models, but be ranked only 15th for Soft Skills and Informal Learning, and 8th for Communities of Learning – the results for any one best practice area did not influence the findings for the other two areas.



Table 5.2 Best practice evaluation criteria, scoring, and scoring weights

CRITERIA	SCORING METHOD	WEIGHT
Learner Models		
1. Skills gap analysis	Yes(1)/No(0)	.100
2. Tutor availability	Yes(1)/No(0)	.150
3. Learner flexibility	Scale: 1-50	.100
4. Control of screen information	Yes(1)/No(0)	.050
5. Defined objectives:		
a. Performance	Yes(1)/No(0)	.025
b. Standards	Yes(1)/No(0)	.050
6. Self assessment	Yes(1)/No(0)	.125
7. Content integration	Scale: 1-50	.150
8. Document management	Scale: 1-50	.100
9. Help facilities	Yes(1)/No(0)	.050
10. Simple user interface	Scale: 1-50	.100
Total:		1.000
Soft Skills & Informal Learning		
1. Activity	Scale: 1-50	.150
2. Reward	Scale: 1-50	.150
3. Transfer	Scale: 1-50	.150
4. Environment	Scale: 1-50	.100
5. Communication interactivity	Scale: 1-50	.200
6. Motivation	Scale: 1-50	.100
7. Learner centred	Scale: 1-50	.150
Total:		1.000
Communities of Learning		
1. Clearly stated purpose	Scale: 1-50	.100
2. Experienced moderators	Yes(1)/No(0)	.150
3. Registration system	Scale: 1-50	.100
4. Synchronous tools	Scale: 1-50	.150
5. Asynchronous tools	Scale: 1-50	.100
6. Group problem solving	Scale: 1-50	.100
7. Calendar	Yes(1)/No(0)	.050
8. Level of interaction	Scale: 1-50	.250
Total:		1.000

The top three sites of each area are discussed in detail in the following section of this study. The scoring and rankings of these top sites are found in Table 5.3. A comprehensive list, including the scoring of each site on each criterion, can be found in Annex 3 – Best Practices Assessment Results.



Table 5.3 Top sites by best practice areas

	www.onlineexpert.com	www.knowledgepool.com	www.e-learning-centre.com	www.onlineexpert.com	www.elementk.com	www.online-learning.com	www.eno.com / www.smartforce.com	www.elementk.com	www.vcampus.com
Learner Models									
1. Skills gap analysis	1	1	1						
2. Tutor availability	1								
3. Learner flexibility	45	30	5						
4. Control of screen information	1	1	1						
5. Defined objectives:									
a. Performance	1	1	1						
b. Standards	1	1	1						
6. Self assessment	1	1	1						
7. Content Integration	45	35	45						
8. Document management	40	30	10						
9. Help facilities	1	1	1						
Total:	94,5	84,5	81,5						
Soft Skills & Informal Learning									
1. Activity				45	45	25			
2. Reward				20	0	45			
3. Transfer				45	40	25			
4. Environment				45	40	25			
5. Communication interactivity				30	40	35			
6. Motivation				20	35	30			
7. Learner centred				45	45	35			
Total:				71,5	70	64			
Communities of Learning									
1. Clearly stated purpose							45	45	0
2. Experienced moderators							1	0	1
3. Registration system							50	40	35
4. Synchronous tools							45	40	45
5. Asynchronous tools							45	45	40
6. Group problem solving							20	40	30
7. Calendar							1	1	0
8. Level of interaction							40	40	30
Total:							85,5	71	64,5

NOTE: The Eno and Smart Force sites access the same e-learning platform and, therefore, were considered one site for the "Best Practices" e-learning assessment.

The spread in total score between the top 3 sites per best practice area varies considerably. Learner Models has less of a spread between the 2nd and 3rd sites, while Soft Skills & Informal



Learning has an insignificant spread between the 1st and 2nd sites. The Communities of Learning area resulted in a consistent spread across the three top sites. In general, the spread across the top 3 sites per best practice area is from 7 to 21 points.

5.2.1. Best Practice Learner Models

The application of "flexible, personal models for learning" is a crucial aspect with regard to the effectiveness of instruction via e-learning. While e-learning providers have the flexibility to design and apply learning models as they deem appropriate, clearly there are approaches to this that are more advisable than others in fostering learning. It is essential that learning models utilize or offer a range of added value tools and application that directly or indirectly assist the provider and/or learner in adjusting the learning experience to the learner's capabilities, learning goals, and preferred learning environment. This minimizes confusion, draws the learner's interests and thereby allows the learner to gain the maximum benefit available from his e-learning experience.

The top 3 sites with regard to Learner Models are: OnlineExpert, KnowledgePool, and eLearning Centre. The follow are case studies of the top 3 sites with regard to Learner Models.



OnlineExpert - LearnKey, Inc.

www.onlineexpert.com

1845 West Sunset Blvd
St. George, Utah
84770-6508

Overview

OnlineExpert is a hybrid next generation delivery infrastructure and e-learning platform. The e-learning platform integrates all of the proven products that LearnKey has developed and introduced worldwide. While LearnKey, Inc. is a provider of e-learning technology, online learning solutions and self-paced training courses to corporate, education, and government, OnlineExpert focuses on individual clients worldwide.

"While our focus remains on the corporate enterprise market the demand is growing very aggressively for self-paced, born-on-the-web delivery solutions. To meet this challenge, we have listened to and engaged our customers who have redefined how they will use the Internet and next generation e-Learning solutions" stated John Clemons, president of LearnKey Inc.

As a direct extension of LearnKey's Intranet product, OnlineExpert provides a quality online experience for the remote learners who cannot reach the corporate Intranet for media-rich content and collaboration.

OnlineExpert Learners can learn in a visual, compelling environment with what is claimed to be high quality instructors. Additionally, Learners can interact with proven e-Mentors who have already been through the demanding process of IT certification.

Fuelled by the current needs of customers and partners, OnlineExpert is formed with the strategy of leveraging existing award winning video and CD-ROM content.

LearnKey has built its reputation over the years by delivering courses of the highest production quality and adhering strictly to learning objectives. The sound instruction provided in the LearnKey courseware cuts the time and lowers the cost of gaining proficiency in a new



software program, certifying in an information technology field or acquiring the interpersonal and business skills necessary to fulfil the needs of customers.

History

Very few companies have a longer history in the business of e-learning than LearnKey's 15 years of continuous operation.

1987

Founder and CEO John Clemons filmed training videos for users of WordPerfect 4.2 in a small basement studio, in Orem, Utah. Clemons, a producer of educational and promotional film projects for the Brigham Young University Motion Picture Studio, developed the concept for a new kind of training tool. At the time, a local software company, WordPerfect Corp., had a hot selling word processing package, but many purchasers needed help to learn the program's powerful features.

1993

LearnKey relocated some company operations to St. George, Utah, 235 miles south of Orem. As instructional technology advanced, LearnKey kept pace

1994

A development team was established in Prescott, Arizona, to produce LearnKey training content in a then-new delivery format - interactive CD-ROM. LearnKey pioneered CD technology as a delivery platform for computer-based training, and by 1998 CD surpassed video as the preferred delivery medium for instruction among LearnKey customers. Until that year, LearnKey R&D efforts had been refocused on delivering e-learning course content online using streaming video and audio technology. Those efforts and a strategic partnership with Seattle-based RealNetworks Inc., led to development of LearnKey e-platforms that deliver streamed training content on enterprise networks and over the Web.

2001

LearnKey created a powerful learning environment specific to the certification IT and business application market. As a direct extension of LearnKey's products, OnlineExpert provides a quality online experience for the dial-up remote learners.

2002

Other strategic relationships have helped produce a LearnKey product line of instruction for software application developers, a line of certification exam simulations and a line of personal productivity skills and leadership training delivered via LearnKey's e-platforms. The company has also expanded into production of custom training content for corporate clients.

Business

LearnKey clients include major corporations like 3M, Dell, Coca-Cola, Citibank, American Express, PricewaterhouseCoopers and Toshiba; mid-market companies such as Heritage Oaks Bank and Windsor Casino; government agencies including the Federal Energy Regulatory Commission and the U.S. departments of Education, Justice and Defense; educational institutions such as Harvard Law School, Yale University, UCLA and University of Nebraska; and non-profit organizations like the NAACP.

Educational Focus

The OnlineExpert series of courses include the Cisco CCNA; CompTIA A+, INet+ and Network+ certifications, Microsoft Windows 2000 Directory Services Administration, Windows 2000 Directory Services Design, Windows 2000 Network Infrastructure Administration, Windows 2000 Network Infrastructure Design, Windows 2000 Network Security Design, Windows 2000 Professional Administration, and Windows 2000 Server Administration; and Microsoft MOUS certifications including Access, Excel, Outlook, PowerPoint and Word.



OnlineExpert applies LearnKey's "Learn From the Experts" instructional philosophy to capitalize on the skills and knowledge of professional trainers, best-selling authors and seminar lecturers to bring expert instruction to customers.

Best Practice – Learner Models

The assessment of OnlineExpert under the pre-established set of criteria, previously described in this report, highlighted this site as a “best practices” provider in the area of Learner Models. As a matter of fact, OnlineExpert classified consistently well in all the criteria utilized within this area.

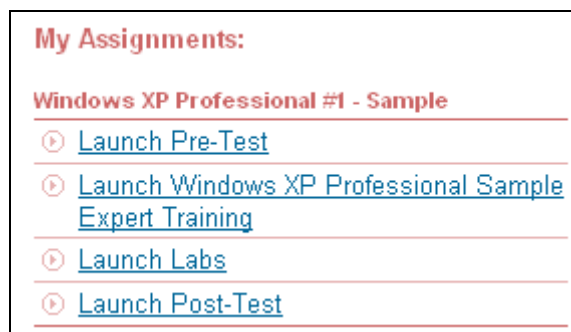
This site allows the learner to be taught in a visual, compelling environment under the guidance of instructors. OnlineExpert allows the learner to train at his own pace and receive a high level of interaction with instructors who keep the learner on track and on schedule.

Generally, OnlineExpert navigation proved to be user friendly and intuitive. The courses are interspersed with live examples and a white board with study notes. They included video, audio clips, full-motion graphics, and animated illustrations. After the basic presentation and overview, the courses proceed with the conceptual aspect of the subject matter, and then to basic and more advanced functionalities. This multimedia training offers the opportunity for a range of resources and effects that enhance the learning experience.

Learners can choose their assignments when they want, according to their own learning styles and pathways under the “assignments” section identified on the main menu bar.



The learner has the opportunity to give input towards the timing and method of the approach they will take in order to undertake the learning.



The “My Assignments” ' first element is a pre-test option covering basic knowledge to access what students know about the subjects. OnlineExpert courses conduct all of their assessments with variations of the traditional multiple-choice exercises. These tests provide instant feedback for answers, and also offer links to complementary information and supplemental resources. While taking the pre-test, the learner can access the Item Review icon to review each question’s status, the Reference icon to show where in the course the information is in reference to the specific question, Report icon to review their current score, and the Main icon to return to the Assignments page.

OnlineExpert courses also utilize a post-test tool where the performance expected from the learner in each subject matter can be evaluated. The post-tests are also variations on traditional multiple-choice exercises but in this case there is no instant feedback on answers.

OnlineExpert expected learning outcomes (defined as being measurable achievements by which a specified competency can be achieved) are always well defined either in terms of



performance (what the learner will be able to do as a result of what has been learned) and standards (the minimum acceptable performance level the learner must demonstrate).

Articles/Resources	Completed
Windows XP Tour Take the Windows XP tour...	✓
Get old programs to run on Windows XP Pro Using Program Compatibility Mode...	✓
Error-Handling Messages A Review of Error-Handling Messages and Exporting Favorites...	✓
3 Articles In Archive	

Recommended Course Text:
Title: Windows XP Professional Study Guide (Exam 70-270)
Author: Curt Simmons
Publisher: Osborne McGraw-Hill
ISBN: 0-07-222297-2

A document management tool is available in order to connect to related articles or resources that can be useful in the learning process. The courses always provide links to additional training resources including a selection of articles or texts that complement the courseware.

OnlineExpert also offers useful online and offline help facilities where learners can make a request and receive direct help. These help facilities are designed to include not only a form to directly interact with the technical support, but also a set of orientations like FAQs or optimisation tips that can decrease the necessary time for troubleshooting.

Help Desk
Read Me
Optimization Tips
FAQ
eSupport
MasterExam
Media Point

The courses also support online mentoring and assignments that cover training access to online mentors. Other interactive assignments include attendance forum attendance and reviews.

The applied training tools and their user-friendliness justify OnlineExpert's ranking as a best practice in the Learner Models area.

Summary information source:

- Project Team online experience with the OnlineExpert platform and courses
- www.onlineexpert.com



KnowledgePool

www.knowledgepool.com

Lovelace Road, Bracknell, Berkshire.
RG12 8SN
UK

Overview

KnowledgePool has been involved in the design and delivery of training solutions for nearly 40 years. The company aims to serve clients through a comprehensive selection of human capital development services, fully supported by a wide-ranging portfolio of products. The strategies adhered to are client-based. KnowledgePool customizes their approach and methodologies to provide solutions that will best suit the client, whether it is via custom e-learning, a more traditional face-to-face, classroom-based tutorial, from their CD-ROM library, or solutions based on a blend of all three.

In this endeavour the company is guided through the following mission statement:

“To enable our clients to maximise business potential through their people by integrating all aspects of talent management and learning development with business strategy and financial performance.”

KnowledgePool offers comprehensive managed learning services, encompassing the identification, implementation and management of organisational training requirements. This has been developed in response to demand from clients to be able to engage a single supplier who can provide managed learning for some or all of their human capital development.

The company boasts many years of experience in the delivery of successful training programmes, a wealth of knowledge and expertise and an honest and flexible approach to every training requirement, giving their clients the assurance and confidence they need in their training provider.

History

KnowledgePool was established in 1964. The company's history spans four decades of operations, from the United Kingdom to the United States. Soon after it began delivering proprietary IT training in the 1960's, the company "ICL Training Services" became a leading player in the IT training market. In 1992, the company was launched as Peritas to support ICL's penetration of the emerging open systems market for UNIX and NT.

Recognizing the power of the Internet and its ability to make learning resources and instructors accessible any time, anywhere, in 1995 Peritas became the first commercial training organization in the world to deliver interactive, mentor-supported IT training over the Internet. Peritas became KnowledgePool in 1999 and the brand quickly gained recognition for its mentoring services, online learning tools, and comprehensive course library. By 1999, it had become a leading European training provider. KnowledgePool subsequently expanded to serve clients in the United States. In 2001, analyst group IDC ranked KnowledgePool among the top fifteen training providers worldwide.¹⁶

Management

KnowledgePool is a wholly owned subsidiary of Fujitsu Services operating under the direction of CEO Paul Butler. The management team strives to maintain a key position in the e-learning industry through serving clients with customized training solutions. In the words of Mr. Butler,



“ . . . at KnowledgePool we have seen a shift away from ‘off the shelf’ training - more and more corporate learning requirements need to be custom built in order to incorporate the strategic business objectives and goals . . . learning programmes should not be designed by technology or the constraints of bricks and mortar but on the basis of organisational objectives and business strategy.”

This managerial approach has put KnowledgePool in a leadership position in the e-learning industry and a top performer in client services.

Business

KnowledgePool has been a major Microsoft Certified Technical Education Centre since the inception of the Microsoft Certification Programme (MCP), and was the first company in the UK to deliver certified Microsoft courses online via an e-learning service. The company's e-Learning Development Centre has been ISO 9001 accredited since 1993. The quality of its services was further confirmed by receiving the Online Course of the Year 2000 Award from the Institute of IT Training.

KnowledgePool has developed a strategic partnership with NETg. With over 30 years of experience in the learning industry, NETg develops award winning e-learning solutions covering IT, desktop and business & professional development skills. This brings NETg's wide range of deployment options such as CD-ROM, Internet and Intranet to KnowledgePool customers.

This relationship helps KnowledgePool stay at the edge of technological implementation. It allows the company to deliver just-in-time, up-to-date training on all Microsoft platforms, and therefore benefit the individual or organization in this highly important area of the industry.

The company's portfolio includes a wide selection of Microsoft accredited courses leading to full technical certification. Through the partnership, and KnowledgePool's experience and expertise in the Microsoft arena, the company can design, deliver and develop customized training projects for corporations of any size, and in any geographical location.

As a Microsoft Online Learning Business Partner, KnowledgePool has worked closely with Microsoft to develop version one and two of the Learning Resource iNterchange - a common way to create, modify and share online learning content.

Educational Focus

KnowledgePool specializes in customized e-learning design and development for the private and public sectors. This service includes the capability for e-learning consultancy and front-end analysis.

The company has developed a portfolio of off-the-shelf training for delivery via CD-ROM or online covering generic management and personal development training products. The training is focused on the greatest needs of client organizations. The company sites a recent survey conducted by Mori for KnowledgePool when 886 people from a cross section of the UK workforce were asked "Which skills are most useful to you in your job?" The respondents showed that soft skills, as opposed to technical skills, were cited as the most useful. Over three quarters of the respondents stated that communication skills were most beneficial to their jobs and team working and self-motivation were cited by 65%.

Thus KnowledgePool's training solutions are geared to meet the needs of learners, as identified by learners. Roughly 60% of KnowledgePool's learners are employees of client organizations (35% are learners of client educational institutions and 5% are private individuals). More than 1 million learners undertake a KnowledgePool course each year.



In all, KnowledgePool offers in excess of 2000 courses, specializing in business and management skills, and IT. Through a strategic partnership with NETg, KnowledgePool offers a portfolio of over 600 IT courses, covering topics as diverse as 'Microsoft Word 2000 Fundamentals' and 'Oracle Web Server'. KnowledgePool also offers a full range of certification training including: ECDL (European Computer Driving Licence), Microsoft MSCE & MOUS, A+ and Oracle OCP.

All courses are fully supported by the following features;

- Online mentoring from tutors accredited in the subject area
- Online assignments
- Frequently asked questions and message boards on each topic or certification course

As well as providing access to these courses via the Internet, the company can assist clients in adding the courses to their networks, intranet or Learning Management System, or develop custom-built courses specific to client requirements. Online mentoring can also support these learning solutions.

To ensure that e-learning programmes match client needs, a comprehensive custom course development service, based on a detailed analysis of training needs and organisational infrastructure, is offered. KnowledgePool has the expertise to develop custom solutions for projects involving:

- Internal processes and systems training
- Channel/dealership education
- Sales training
- Health & safety / Induction training

KnowledgePool is a pioneer of e-learning. Their e-Learning Development centre has been creating technology based training solutions for a worldwide market for over 20 years, and in 1995 KnowledgePool became the first company in the world to deliver live, interactive Internet-based training.

Best Practice – Learner Models

KnowledgePool fit well with the criteria used in its identification as a best practitioner in Learner Models.

Among these criteria was the question of making a skills gap analysis – or other learner profiling tools - available to learners prior to taking a course. In the case of KnowledgePool, many courses include assessments or allow users to skip elements of a course that they have a firm grasp on already. This also allows learners to choose their own learning pathway, thus effectively tailoring the e-learning to the needs of learners.

KnowledgePool also provides an invaluable Online Mentoring Support system. This allows learners to have access to qualified mentors to help and advise them on specific areas and to guide them through the many accreditation paths offered. Their mentors are based around the world, and provide support for learners via interactive chat, message boards or e-mail. All online courses have mentor support via e-mail and the majority have live, interactive chat support at any time, any day of the week.

In order to ensure learner participation, motivation and comprehension, flexibility and help facilities are considered appropriate. In this regard the company states: "KnowledgePool has always recognised that for effective, successful learning human interaction with tutors and peers is vital. The inclusion of 24/7 live interactive mentoring as part of our online learning service motivates, encourages and provides real time answers to learners' enquiries." Beside the learner flexibility already described, courses include a self-evaluation exam at the conclusion of each topic studied, and post-course self-assessments. KnowledgePool is also careful to present learning objectives clearly on courseware, thus removing ambiguity.



KnowledgePool courses allow browser playable software for all course subjects offered.

The Learner Model applied by KnowledgePool is outstanding in the industry. This is reflected in feedback from the company's learners, showing that their online system is "user friendly, very intuitive and easy to navigate".

Summary information source:

- Questionnaire responses
- Project Team online experience with the Knowledgepool platform and courses
- www.knowledgepool.com



eLearning Centre

www.e-learning-centre.com

148 Leadenhall Street
London
EC3V 4QT
UK

Overview

The eLearning Centre (ELC), together with its sister company, Visual Software Training, has been involved in the provision of Information and Communications Technology (ICT) distance-learning training programmes since 1994. The centre specialises in interactive, multi-media website design training programmes aimed at a wide range of skill levels.

ELC has developed an interesting platform that integrates a virtual-reality 3-D e-Learning Centre. ELC platform can enhance sharing of information on the Internet using data integration, audio, and video capabilities - resulting in more flexible and dynamic communications.

Business

Each of ELC's training programmes have been devised and developed in-house and many other training providers, including several Universities and Colleges, now utilize their services. The company's clients include many leading international companies such as the Ford Motor Company, IBM and Johnson & Johnson.

Educational Focus

ELC offers training courses on a wide-range of subjects via online, CD-rom, and corporate settings. The online and CD-rom subjects cover a range of IT applications, web design, and include PC maintenance courses.

The corporate and education institutional support offered by ELC is custom to the client. The courses that ELC supports within this environment are mainly IT skill related, but not limited to this subject area.

Best Practice – Learner Models

ELC ranked well with regard to the criteria "degree of interaction with other learners", and "degree of interaction with a tutor". This was due to the offering of a virtual classroom.

The virtual classroom is an integral part of the e-Learning Centre technology platform. Here learners may participate in a tutor-led class at their own PC and receive instructions directly from the tutor in real-time over the Internet. The participants receive real-time audio from their Instructor and real-time course presentations via support software. The instructor controls



what is displayed on the screen, which may be anything from a PowerPoint presentation to an actual program covered by the course. The instructor may also include intermissions in the sessions so that the learners can confer and discuss various questions or issues raised by the instructor or each other, which helps the learners to fully comprehend the subject matter and can help to clarify any unresolved issues.

The integrated User Forum enables the course participants to assist one another, find solutions and share their experiences. The User Forum can also be used for asking open questions to other learners thus allowing individual learners to benefit from the group's gained knowledge. The learner is also encouraged to take a pre and post test to assess their knowledge in the subject area. This provides immediate feedback that can be very effective if used in a positive format.

A mentor can also be assigned to each learner or group of learners. The mentor need not be the instructor, but is someone who can provide practical advice and help. The learner and the mentor can communicate by email, by phone, or through the User Forum.

Through utilizing the User Forum and virtual classroom, the e-Learning Centre utilizes a wide range of technology and pedagogical tools which can, in a flexible and efficient way, be used for many training and educational purposes; thus, providing an extremely interactive learning environment and making online learning a convenient experience.

Virtual Classrooms can enhance the fast, simple sharing of information on the Internet using data integration, audio, and video capabilities through a standard web browser - resulting in more comprehensive, flexible, and dynamic communications. The quality of an online classroom is determined by both the quality of the individual components and the seamless integration of those components to create a positive overall user experience.

Following it is presented a series of items that describe the different features that an experience in ELC provides. These features highlight the virtual environment around ELC classrooms and the way it relates with the 'learner models' set of criteria.

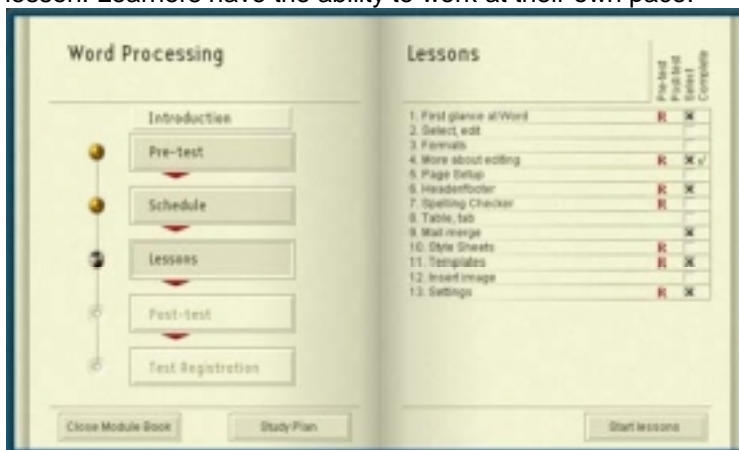
The entrance page is a reception area that simulates the entrance of a real building and there is a receptionist for a brief introduction. This provides an informal environment and relates the whole learning process with the real world.

At the entrance level learners can choose to go to the Presentation area. By clicking on the items, which provide an overview of the training modules is presented. In the Study Guide, which is required prior to beginning the assignment, learners are instructed how to plan the work.

The 'second floor' of the virtual building presents the work tools that learners have available to start the courses. There is a Bulletin Board with news and items of interests, and a Study Plan that provides an outline of the course – how far a learner is going in the modules, the tests that learners registered for, the time scheduled, etc.



The modules are presented as if they were books. There is one book for each available module. Clicking on the books initiates the module with an overview of the course and an outline of each lesson. Learners have the ability to work at their own pace.



Learners can define their own way of working. Learners can also start a lesson directly by clicking on the appropriate link. At the beginning of each lesson, learners can complete a pre-test to analyse their knowledge on the lesson's subject matter. Subsequently, there is a post lesson test to assess the learner's retention of the material. If the learner passes the test, the module is completed.

There is a notice board with the diplomas corresponding to completed modules. This allows learners to see how far they progressed and to have a virtual reward for their activities. The one weak characteristic of the ELC site is the inability to manage documents in an effective and useful way. In general, the features described above allowed ELC to classify very well in the "learner models" area.

Summary information source:

- Project Team online experience with the ELC platform and courses
- www.e-learning-centre.com



5.2.2. Best Practice Soft Skills and Informal Learning

Soft Skills & Informal Learning applies to learning through working together - gaining soft skills (interpersonal skills) through communicating and interacting with others. Generally, this is external to the aims of conventional learning in a classroom setting, but is greatly fostered by such environments because learners are in physical proximity and interaction takes place more naturally. In the field of e-learning this valuable type of educational development can easily be overlooked. As an important part of learning, it is only the best sites that will have made this a priority and sought to promote education through interaction despite the problem of physical distance between learners. Thus, the evaluation in this study assessed the degree to which e-learning sites supported the learner in developing soft skills (interpersonal communication, team work, leadership, project management, etc.) through the sharing of knowledge, dynamic learning content generation, etc.

The top 3 sites with regard to Soft Skills & Informal Learning are: OnlineExpert, Element K, and Online-learning. The follow are case studies of the top 3 sites with regard to Soft Skills & Informal Learning.



OnlineExpert - LearnKey, Inc.

www.onlineexpert.com

1845 West Sunset Blvd
St. George, Utah
84770-6508

OnlineExpert was selected as a best practice Learner Model and, therefore, the company Overview, History, Business, and Educational Focus summaries are presented in the previous section 5.2.1. Best Practice Learner Models.

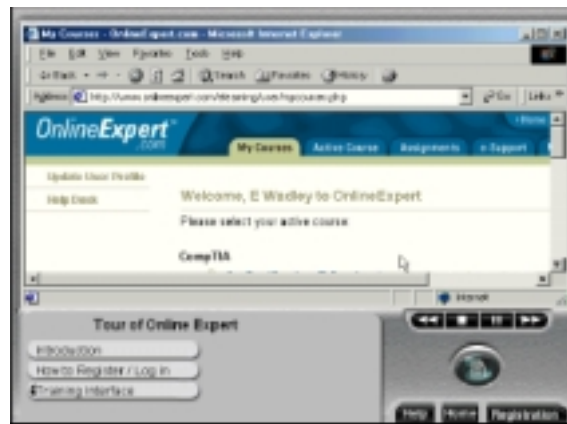
Best Practice – Soft Skills and Informal Learning

The evaluation of OnlineExpert under the pre-established set of criteria, previously described in this report, highlighted this site as a “best practices” provider in Soft Skills & Informal Learning.

These criteria are related to skills gained through guided practical experience, the level of activities aimed at supporting learner interaction, the applicability of skills gained – or “transfer” of learning to application, the rewards and motivating factors used as incentives for encouraging interaction, and the actual level of interactivity among learner groups.

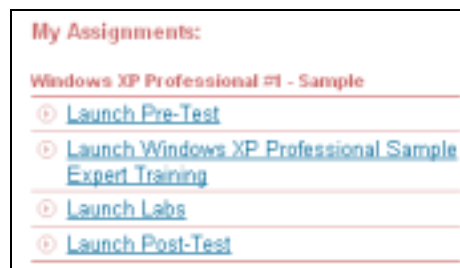
OnlineExpert sessions mix presentations, interactions with others, and “hands-on” practice. The courses are interspersed with live examples and a white board with study notes that create a supported but informal environment that motivate the learner.

In this way, skills are learned through a guided practical experience and subsequently are likely to be learned more thoroughly, better retained and are more likely to be used in the workplace. The sessions also highlight on the relevance of the learning to the learners real life. New skills learned are presented in a way that they can be applied directly back to the workplace.



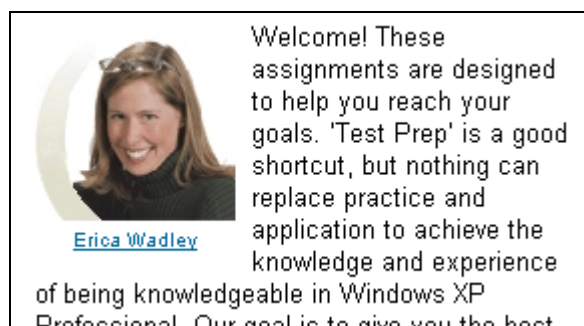
On the other hand, the courses are not structured in a way that they reward the learner for their retention and understanding of the subject matter. Reward by recognition and reinforcement of successful efforts or contributions is an important motivation tool. OnlineExpert does not leverage the reward and reinforcement aspects to their potential capability. Recognition is only given by a classification of the learner's test results.

The courses prove to be very learner centred so that the learner has the opportunity to give input towards the timing and method of the approach they will take in order to undertake the learning. The approach is flexible enough so that learners can learn on their own. Learners who prefer to learn more independently will move through the assignments more quickly. Learners can choose their assignments when they want, according to their own learning styles and pathways in the assignment section on the menu bar.



While the test items were described in the Learner Models section, from a Soft Skills and Informal Learning viewpoint it is useful to highlight the "Launch Labs" activity. This activity is highly interactive not just illustrative. This means the learners are asked to demonstrate the answer. The learners may click a "Steps" icon to show how to complete the question or a "Reference" icon to show where in the course the relevant information is located for the specific question.

OnlineExpert courses tend to lack with regard to fostering motivation within the learner. Fostering motivation within the learner is usually achieved by trying to show the learner the true need to learn the relevant subject, which is not achieved within OnlineExpert courses.





There is also an opportunity for the courses to improve in the aspect of communication. Promoting the attainment of interpersonal skills through e-learning depends very much on a facilitator. In the OnlineExpert case it is only occurring in an asynchronous way, which is extremely limiting in the potential that interactive communication could have in developing soft skills. Despite the existing effort in simulating a personalised learning by giving a real face and a real name to each mentor, the communication only takes place in asynchronous ways such as e-mails or forms.

In the end it is important to make reference to the fact that despite being classified in the first place in the ranking of Soft Skills and Informal Learning, the overall scoring according to the weighted average of the criteria was only 71,5%. This result may show that in this particular area there is still significant opportunity to improvement..

Summary information source:

- Project Team online experience with the OnlineExpert platform and courses
- www.onlineexpert.com



Element K

www.elementk.com

148 Leadenhall Street
London
EC3V 4QT
UK

Overview

Element K was founded in 1982 as Logical Operations Inc. At its inception the company's aim was to help train the employees of client organizations on the use of the microcomputer – cutting edge technology at that time. The subsequent years brought a series of acquisitions, and consequently change in the focus of the company's activities. In 2000 the company merged again and became Element K, an e-learning company concentrated on developing courseware, newsletters and training publications, and delivering training online. Element K operates under the following mission statement:

“To be the leading provider of integrated learning solutions that enable organizations and professionals to build knowledge and increase productivity”

The company has been responsible for a number of “firsts” in online learning, including its current offering of downloadable courses. It offers training solutions to a variety of client groups, including Fortune 1000 companies, universities, government organizations and individuals. Element K's offerings including “instructor-led online courses, self-paced tutorials, vLabs, professional certifications, a comprehensive reference library and KnowledgeHub™, a next-generation learning management system.”

History

The following timeline indicates the significant events and shifts in the development of Element K:

1982-1989

In 1982, the company was founded as Logical Operations, Inc., to help companies train employees on the then-brand-new microcomputer. Between 1986 and 1989, Logical Operations introduced 15 workshops (including Lotus 1-2-3), and realizing the scarcity of quality courseware, expanded into publishing courseware. With the development of refined courseware, Logical Operations began marketing an extensive catalogue of PC and Macintosh training materials to colleges and the budding training center industry.



1991-1993

In 1991, Ziff-Davis acquired Logical Operations, based on its profitability and reputation. Ziff-Davis also acquired The Cobb Group, a respected publisher of journals, CDs, and other online media resources for computer education. By 1993, Logical Operations was the nation's leading publisher of personal computer training products and one of the largest personal computer training facilities in the world.

1996

www.LearnItOnline.com was launched, the first major online learning site with interactive self-paced IT courses. (*)

1997

Logical Operations and The Cobb Group renamed ZD Education and ZD Journals, respectively.

e-ILT (online instructor-led training) - first to introduce asynchronous IT e-learning. (*)

Online LMS Functionality - the first to integrate content and LMS functionality on the web, including course tracking, reporting, and online assessment. (*)

Launched first consumer learning portal - ZD University at www.zdu.com. (*)

1998

Corporate online - ZD Education launched its corporate version of ZDU - a comprehensive website offering computer-training courses to businesses and their employees. First to integrate self-study and e-ILT (*)

Micron U. - first to offer co-branded solution (*)

Learn Pro - new line of instructor-led courseware. This model is the first to shift learning responsibility to the learner. (*)

1999

ZD Education focuses www.zdu.com on the corporate market and Ziff-Davis Corporate launches www.smartplanet.com, a redesigned version of ZDU, for the consumer market.

Books 24x7 - first to integrate reference learning (*)

2000

ZD Education acquired by U.S. Equity Partners and renamed Element K. Element K formally restructured to include four business units:

Element K Online (e-learning)

Element K Courseware (courseware)

Element K Journals (newsletters and training publications)

Element K Learning Center (Rochester, NY, training center)

Downloadable courses - first to offer downloadable courses, making the benefits of online training available offline - anytime, anywhere. (*)

vLab® technology - first to offer Cisco® training powered by 24/7, live, interactive online learning labs. (*)

* Indicates an Element K industry first

Management

Element K is a private corporation led by the experience and vision of an executive team. This team includes specialists from a variety of required disciplines related to administrating an effective e-learning company. Their functions include: Executive Vice President and Chief Financial Officer, Executive Vice President of Development and Operations, Senior Vice President of Direct Sales, Senior Vice President and General Manager of Element K Courseware, Senior Vice President – Secretary and General Counsel, Senior Vice President of Business Development and Strategic Relationships, Senior Vice President and General Manager of Marketing, Chief Learning Officer, and Executive Director of Education.

The company's Chief Executive Officer is Mr. Bruce Barnes. Mr. Barnes, with more than 10 years of experience in developing media and technology businesses, is responsible for



Element K's strategy and financial growth. Before joining Element K, Bruce was a managing director and co-head of the private equity group at Wasserstein Perella Group, Inc., and a senior member of its merchant-banking group. Previously he had been Executive Vice President of Ziff Brothers Investments, L.L.C., a private investment company, and Senior Vice President and chief financial officer at Ziff Communications Company, the holding company for a predecessor of Ziff-Davis. He now works to achieve the company's objective of leading the industry in corporate and private training, e-learning courseware, books and classroom instruction.

Business

Element K is privately held and is financially backed by U.S. Equity Partners, Rustic Canyon Partners, Highfields Capital Management, BankAmerica Capital Investors, BancBoston Capital, New York Life Capital Managers, and other private investors.

Element K's strategic partners include leading information technology publishers, such as Harvard Business School Publishing, McGraw-Hill, Books 24x7, Isopia, and Brainbench. The company has also partnered with computer manufacturers and software publishers, such as Gateway, Microsoft, Macromedia, Adobe and Micron Electronics, to enhance their product training offerings and in many cases develop co-branded e-learning sites for their product users. To date the company has provided professional training to more than 8,000 corporate clients

The company identifies their primary competitors to be other well-established e-learning providers such as SmartForce, NetG and Digital Think.

Element K's efforts to develop effective and appropriate e-learning solutions has been well recognized. The company has received numerous honors, including:

- Brandon Hall's "Short List":
Content Library and Learning Management System Packages, 2001
- Clarica's Vendor Quality Award, 2001
- Forbes Magazine, Best of The Web, 2000
- Forbes Magazine, Best of The Web, 2001
- Society for Technical Communication
- Numerous International, Excellence and Merit awards

The company's writers and editors have received over a half dozen awards from the Society for Technical Communication during the past decade. In the past year Brandon Hall recommended Element K be included on the "Short List" of 2001 LMS vendors, specifically for their Content Library and Learning Management System Package. Forbes Magazine selected Element K as a Forbes Pick for corporate training for two consecutive years.

The company recognizes its current strengths to lie in its depth and breadth of content, various modalities to support learning, educational heritage and instructional design, professional services, extensive learner and catalogue management, state-of-the-art solutions, and localized content in several languages.

With its eye on future industry developments, Element K is launching its 2nd generation learning platform: "Knowledge Hub", and expects to realize revenue in 2002 of more than USD 100 million. The company states:

"We believe the e-learning industry will continue to growth at a substantial rate. We are investing heavily in our new learning platform. We are investing in investing staff to develop curriculum for the high tech sector."

It is evident that Element K is an innovator in its industry, and proactively pursuing its aim of leading the e-learning industry.



Educational Focus

While the company is active in areas not necessarily related to the administration of e-learning courses (additional activities include developing courseware and technical journals, developing an LMS – Learning Management System, and providing Learning Management Consulting), providing e-learning courses remains a primary activity.

These courses focus primarily in areas consistent with the technical specialization of the company. These areas include IT (including database management, design, e-business, networking, and programming), Project Management, Business, and Health & Safety. In these areas the company has developed a broad spectrum of courses, tailored to the needs of their clients.

Element K's e-learning features highly interactive and engaging courses with virtual lab technology (vLabs®), streaming video simulations, self-paced tutorials, instructor-led training, 24/7 technical support via live chat, and technical support five days a week via email and telephone. Element K currently provides e-learning to 34 of the *Fortune* 100 companies and Element K Online (www.elementk.com) offers subscribers in 144 countries round-the-clock access to more than 800 online courses on a wide range of IT and computing topics. These include office productivity, design and media, computer programming, Web development, databases, hardware networks and operating systems, Cisco training and telephony, as well as e-business, project and business management, and workplace safety. Elementk.com also distributes more than 700,000 "Element K Tips" messages each.

Currently some 90% of Element K's clientele come from corporate clients, while less than 5% are private individuals. This may seem like a dramatic difference, but it is not so extreme when one considers that a corporate client can easily account for hundreds, if not thousands of learners.

Best Practice – Soft Skills & Informal Learning

The evaluation of e-learning sites which resulted in the identification of Element K as a "best practices" provider in Soft Skills & Informal Learning followed a pre-established set of criteria, as previously described in this study. These criteria related to the level of activities aimed at supporting learner interaction, the applicability of skills gained – or "transfer" of learning to application, the rewards and motivating factors used as incentives for encouraging interaction, and the actual level of interactivity among learner groups. Because soft skills are generally gained through group interaction, this area is inherently related to Communities of Learning.

Promoting the attainment of interpersonal skills through e-learning depends entirely on the facilitator providing opportunities for learners to work together and interact in a virtual environment. Element K has done well in this regard. Element K's desktop courses are based on simulations. The company acknowledges that their approach is: "to apply a learning-by-doing training approach". This is achieved through extensive use of simulations and exercises designed to bring learners together in applying their learning.

The company offers several tools critical to learner interaction and informal learning. These include both synchronous tools – such as chat, live audio and video – and asynchronous tools – such as message boards and e-mail exchanges. Learners are also invited to participate in community-based learning forums.

As an example of client service offerings that promote interaction and learning by doing, Element K has Cisco and MCSE certified self-paced courses that include an optional lab exercise function, which allows for learners working together in a moderated environment. These are called vLabs, which is a product that allows learners to practice their learning in real time with actual equipment. In these cases learners can choose assignments and scenarios, or they can choose to work individually.



Element K's self-study courses are developed with a friendly and supportive feel. In their QuickSkill course model learners are granted the opportunity to try again if they make an error (they can also choose to have the system demonstrate the correct completion of a task for them).

In order to ensure learners willingly participate in activities geared toward enhancing interaction and informal learning, Element K has taken steps to ensure that the successful efforts or contributions of learners are recognised and reinforced. These include the attainment of credits (educational credits can be issued for the completion of an eILT - online, instructor-led training course), the issuance of certificate for the completion of self-study courses, and Brand Bench exams are offered to identify areas of strengths and weaknesses. Element K is also careful to facilitate learning and the motivation to learn through delivering friendly, supportive and personal feedback from the system operators or instructors.

Summary information source:

- Questionnaire responses
- Project Team online experience with the Element K platform and courses
- www.elementk.com



Online-learning

www.online-learning.com

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Canada K2H 1B9

Overview

Online-learning is a provider of online courses specifically for technical writers, information designers and web authoring professionals. Their courses are instructor-led, assignment-based and University certified.

For the last 25 years, Online-learning.com has conducted extensive research around the world in e-learning. Through this research, the company has discovered that successful e-learning lies in providing learners with rich and detailed course materials, frequent instructor-learner interactions, regular learner-to-learner interactions, and practical task-based assignments. All courses employ these techniques in delivering a sound learning experience. Online-learning shares their research findings with the e-learning community on a regular basis through conferences, professional lectures, seminars, and workshops. Their philosophy, and focus on research and development, helps produce online courses that provide high-quality learning experiences.

History

The professionals at Online-learning have been active in distance education for more than 25 years. The company offers high-quality content using an instructor-mentoring approach that combines traditional classroom techniques with the communications convenience of the Internet.

The company has been in operation since 1995; with courses initially developed and taught at universities and subsequently to business enterprises.

Management

Online-learning is led by President and CEO Dave Thomas. Mr. Thomas is an active adjunct professor at Carleton University and an adjunct professor at University of Queensland in Australia. He is also an advisor to Acadia University, Daltech and Algonquin College. Mr. Thomas has over 30 years of experience in traditional and distance education first as



Professor at Carleton University, then later as founder and high-tech executive within Object Technology International and now at Online-learning.com.

The company's leadership also relies on the following staff of highly-qualified individuals, who fulfill crucial roles in the guidance and operations of the company: Dr. Paul Beam – Chair of the Advisory Board; Suzanne Skublics – Vice-president, Education Technology and Engineering; Doug Talbott – Vice-president, Content Development; Susan Bodnik – Instructor Coordination; Omar Semaan – Manager, Marketing; Ken Holman – Advisor; Dr. Brad Mehlenbacher – Advisor; and Professor Randy Harris – Advisor. Together, this team has many years of experience developing and delivering traditional and online courses in both academic and corporate environments. Their teaching experiences range from teaching at the university and college level, to delivering professional lectures, seminars, workshops and online presentations

Online-learning.com also has an advisory board of industry leaders in technical documentation, information design and XML authoring. The expertise and guidance of this board helps ensure that the company is providing the right courses for individual careers, specifically for electronic authoring professionals.

Business

Online-learning offers a well-rounded catalog of services to meet client needs. These include providing consulting, tools, and custom development of standards-based course content. They have a limited number of available instructors and consultants to provide these services, and are "100% committed to open standards and are actively involved in the early deployment of standards."

The company has a number of business partners, including:

- Carleton University - Canada's 8th-ranked academic institution. All Online-learning courses are certified by this school's Professional Development Division
- Ohio University - one of the largest universities in the United States offering over 10,500 courses in 170 areas of study. The university's Office of Community and Professional Programs certifies Online-learning courses in the United States.
- One On One Computer training
- World Wide Learn creates an easy to use online education tool. Along with categorized directories of online learning resources, World Wide Learn also acts as a portal to online courses, tutorials, classes, degrees and workshops.
- SoftQuad provides quality solutions that are ahead of the pack in technology and usability. SoftQuad provides the XML editors for Online-learning professional XML and XSL authoring courses.
- Ottawa Center for Research and Innovation (OCRI)
- Information Design & Delivery (IDDPs) and E-Learning Professionals - the leading staffing agency and a consulting service
- The Development, Consulting and Training Network (DCT)

Educational Focus

Online-learning.com offers mentor-based courses aimed at people interested in becoming electronic content authoring professionals. They offer courses in professional technical writing, document usability testing and a variety of XML related courses for authoring professionals who need to build single-source documents.

Naturally, typical learners of an Online-learning course include authors, writers, information designers, publishers, technical writers, web masters, web developers, and library personnel. This learning provider currently courses in technical writing and document usability as well as XML related courses designed to help documentation and web professionals take advantage of emerging technologies to implement single-source documentation strategies.



Online-learning's Information Design Series offers practical training in four core Information Design skills: writing, visual design, human factors design, and scripting.

The writing courses provide learners with a systematic approach to writing in general and specific practical training in writing and designing technical documentation, online help systems, and web-based courses. The human factors design courses provide learners with a systematic user-centered design approach to the design of online information and practical experience in user interface analysis, user interface design and usability testing. The programming courses provide learners with experience in client-side and server-side scripting so that they gain an understanding of how online systems are built. They also provide learners with practical experience in authoring information using XML technologies (XML is the industry-standard for developing online single-source information delivery systems and online eBusiness applications). In addition, learners are offered support courses in screen graphic design and graphic design.

Industry experts using a proven mentored-learning model teach all of the courses. Using this model, Online-learning has achieved learner completion rates of over 80%. The model combines the mentoring power of traditional classroom training with the communications convenience of the Internet.

Using this model, learners work through course materials, interactive quizzes and assignments at their own pace. When they have questions, they have fast, convenient access to expert instructors via one-on-one e-mail, scheduled chat sessions and monitored discussion boards. Depending on the length of the course, learners must complete between three and five assignments. These assignments provide learners with an opportunity to practice the new skills they are learning. Once learners complete an assignment, they submit it for marking and feedback. To receive a certificate, learners must average 70% on their assignments.

Online-learning has set forward the guiding principles upon which they have developed their educational model, as follows:

- “We develop courses to meet the needs of a specific group of individuals and tasks.
- We plan and publish learning objectives for each course.
- We use appropriately skilled professionals in the planning, development and delivery of courses.
- We evaluate learner performance through written, submitted and marked assignments.
- We insist learners complete all assignments in order to receive a certificate of completion.
- We insist learners maintain an average of 75% on the assignments in order to receive a certificate of completion.
- We have a process for ensuring that CEU standards are met and review the process annually.
- We maintain a record of learner marks.”

Online-learning's learning model summary:

- Online expert instructors provide a personal touch and regular feedback.
- 4-6 hours study time per week for 6,8,10 or 12 weeks allows professionals to fit a full-length course around their own busy schedules.
- Real-life assignments give the practical training needed to enable the application of new skills at the learner's place of work.
- Assignments and quizzes teach both "what and how", including use of tools of the trade.



- An online community, using email, chat rooms, forums and live conversation facilitates support and motivation from instructors and communication between learners.
- Responsive instructor evaluations on assignments provide valuable, regular feedback on learner progress.
- Course material developed by experts provides the foundation and structure to work at the learner's own time with guidance from the instructors. This ensures maximum benefits from learner efforts. Certificate of completion of the course from Online-learning.com recognizes the value of learner accomplishment, and of the enhanced skills and knowledge they can bring to your place of work.

Best Practice – Soft Skills & Informal Learning

Online-learning was identified as a “best practitioner” in the area of Soft Skills & Informal Learning. The characteristics of the site, in terms of their fit within the criteria established, are described below.

In the interest of developing “soft skills” and otherwise “learning informally”, Online-learning incorporates an exemplary level of both learner-instructor and learner-learner interaction. For example, learners in the Professional Technical Writing course complete two of the four assignments as a group. The other courses offer work for those learners who would like to collaborate on projects. Arrangements can be made for learners who wish to complete the work on their own. In this way, course activities and interaction are tailored to the preferences of the learner.

All courses are taught using an instructor-mentoring approach. The approach lets instructors guide learners through the course materials using mail, chat and discussion groups, so that learners can complete the course assignments. This approach is used because through the company's research it has become convinced it is simply the best way to learn online. It provides the best features of traditional classroom-based learning with the convenience of online learning, thus ensuring that the circumstantial benefits of traditional classroom learning (i.e. soft skills and informal learning) are not lost.

Though learners are responsible for reading the materials and completing the assignments, instructors get them started and provide them with feedback when they encounter roadblocks or difficulties. Instructors also review each assignment and provided personal feedback to each learner. The approach is flexible enough to accommodate learners who prefer to learn on their own. Learners who prefer to learn more independently will ask fewer questions and move through the assignments more quickly.

Online-learning courses typically last about three months and are equivalent to over 100 hours of class instruction. They are designed to balance personal effort, assignments, interactive feedback, and learning time - while maintaining the learners' interest. There is usually an opening chat session during the first week of the course to help learners get oriented to the materials and to allow them to ask questions. Learners receive weekly updates from the instructor to help guide them in their studies. Learners who require assistance consult with the instructor by email. Learners receive quick responses from instructors, so help is readily available. Learners communicate with each other and the instructors via email, chat rooms, bulletin boards, and live conversation. In addition, instructors monitor learner progress throughout the course by the assignments, bulletin board postings, and questions.

Online-learning also does well in ensuring the transfer of learning into the learner's professional environment. Learners complete between two and nine assignments depending upon the course. The assignments allow learners to practice real-life tasks. For example, learners write their resume as a first assignment in the writing course. This allows for training in basic writing techniques. The instructors mark all assignments and provide learners with valuable feedback on what they did right and where they need to improve. Learners have to complete the assignments in order to receive their certificate of completion.



Recognizing the importance of motivation and reward, Online-learning has developed a certification system. Upon successful completion of a course, learners receive a certificate of completion from Carleton University's Sprott School of Business Continuing Education Program. Carleton University's Sprott School of Business Professional Development Division certifies all of the courses in the Information Design program. All courses are certified in Canada and United States by specified educational affiliates. Learners can choose to receive a Certificate of Completion from one of these schools. While these courses do not contribute to the university's degree programs, they attest to the learner's competency in the subject matter upon successfully fulfilling the requirements of the course and provide the learners with professional status relative to the course subject matter taken.

Participating Universities and Colleges:

- Carleton University
Sprott School of Business, Professional Development Program
- Ohio Univeristy
Office of Community and Professional Programs

Each course is assigned a Continuing Education Unit (CEU) value. One CEU is defined as ten hours of participation in an organized continuing education experience under responsible sponsorship and qualified instruction. The number of CEUs awarded per course is determined to be the "average" number of hours required to complete the course. In order for a learner to receive a certificate, they must complete all of the assignments for a given course and maintain an average of 75% on all of the assignments.

Additionally, Online-learning provides learners with the opportunity to opt out of receiving communications from Online-learning. The needs, interests and privacy of learners are a priority, as they also have the option to remove their contact identification information from the database so that they will no longer receive communications.

Online-learning.com's courses are well-suited for busy professionals since they provide learners with the opportunity to learn when it is most convenient. Their courses are instructor-led, providing interaction and access to experts in the industry. Finally, they provide the needed balance between learning, discussing, and doing to allow real learning to occur.

Summary information source:

- Project Team online experience with the Online-learning platform and courses
- www.online-learning.com



5.2.3. Best Practice Communities of Learning

As previously defined, a “Community of Learning” refers to groups of individuals with similar learning needs, who share the educational experience and who maximize their learning through this sharing. This is deemed an essential ingredient in utilizing e-learning to its maximum potential, and in accordance with the European Community’s specified interests it is one of the best practice considerations applied in this study. The evaluation took into account the specific support measures the e-learning sites utilized in order to identify and implement virtual communities, within and across organisational boundaries.

The top 3 sites with regard to Community of Learning are: Eno / Smart Force, Element K, and VCampus. As noted within Table 5.3 – Top sites by best practice area, the Eno and Smart Force sites access the same e-learning platform and courses and, therefore, are considered one site. The follow are case studies of the top 3 sites with regard to Communities of Learning.



SkillSoft

www.skillsoft.com

US Headquarters
20 Industrial Park Drive
Nashua, NH 03062
603-324-3000
800-327-6960



International Headquarters
The Lansbury Estate
Lower Guildford Road
Knaphill, Woking
Surrey, England GU21 2EP
Tel: 44 (0) 1483 795 2000

It is important to make reference that during the period of this study some facts happened that directly affected the work development. In the widely predicted period of consolidation in the e-learning market, two of the largest vendors have just completed a merger. In this particular case SmartForce merged with Skillsoft. The new company, called SkillSoft, capitalises on SmartForce's strength in information technology courseware, and SkillSoft's position in business skills training.

Since SmartForce had been selected before the merger as a best practice and Skillsoft now represents the site, the study team decided to pursue the evaluation with Skillsoft.

Overview

SkillSoft, formed through the merger of e-learning pioneers SmartForce and SkillSoft, provides a combination of strengths in products and service. With a claim of more than 3,000 customers spanning the financial, healthcare, technology and governmental industries, and nearly two decades of experience, SkillSoft's proven e-learning solutions achieve real, tangible results. SkillSoft keeps the learner at the centre of the learning experience through high quality solutions.

SkillSoft offers the content, technology and services to deliver, instructionally rich, results-driven e-learning solutions.



History

1984

SmartForce had its first steps, founded as CBT Systems in Dublin, Ireland.

1998

SkillSoft Corporation was founded.

1999

SmartForce took its name in conjunction with its move to Web-based training.

2000

SmartForce introduced a new integrated object-based e-learning application architecture called e3.

2000

SkillSoft went public.

2002

SmartForce merged with Skillsoft. The new company, called SkillSoft, capitalises on SmartForce's strength in information technology courseware, and SkillSoft's position in business skills training.

Management

Skillsoft (currently) is led by management and a board of directors derived from both companies. Greg Priest, chairman and chief executive officer of SmartForce, is chairman and chief strategy officer of the merged company. Chuck Moran, president and chief executive officer of SkillSoft, serves as president and chief executive officer. Tom McDonald, executive vice president and chief financial officer of the previous SkillSoft, holds the same position at the merged company. Of the five additional executive vice presidents serving for the new company, three come from SmartForce and two from SkillSoft. The new board of directors include three directors who sat on SmartForce's board, three directors who sat on SkillSoft's board and one new outside director originally nominated by SkillSoft.

Business

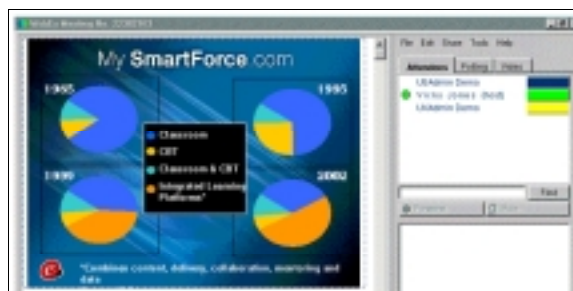
The depth and range of the SkillSoft content library is enriched and empowered by a content development framework - unique to SkillSoft - that is unmatched in the industry.

To ensure that it offers the best, most comprehensive and vendor-authorized content, SkillSoft has a variety of co-development partners, which include: Microsoft, Dell, GoTrain Corporation, Macromedia, and Cisco Systems. This means that SkillSoft can deliver quality content rapidly. SkillSoft has formed strong, often exclusive, working relationships with prestigious partners who are acclaimed and acknowledged leaders in the IT software, consulting, business skills, and medical training industries.

SkillSoft customers include organizations such as: First Union, Clarica (Canada), Ernst & Young, Fluor Corporation, Verizon, U.S. Army, Deloitte Consulting, Raytheon, IBM, Internal Revenue Service, Lockheed Martin, Microsoft, Army National Guard, Dell Computers, Qwest, Department of Transportation, NEC America, British Telecom and Wells Fargo.

Educational Focus

SkillSoft is a leading provider of e-learning courseware and referenceware for business and IT professionals. SkillSoft products and services are designed to accelerate the ability of today's workforce to master the business and technology skills required for competitive success. The company currently has more than 2,800 corporate customers worldwide and more than 4.5 million licensed users.



Each synchronous event has the option of being recorded and replayed at another time. This makes it an extremely useful asynchronous tool.

The site includes an option of giving feedback to the event and rating it on a set scale. This can provide information to the managers of the site to make improvements as necessary.

The discussion area includes 3 different tools: Open synchronous forums (with the option of being monitored), "Threaded discussions" and Contributions.

- The synchronicity of the forums is supported through the use of the chat tool
- The conferences allow to have asynchronous interaction between the community members
- In the 'Contributions' area, there is a forum that allows the user to post comments and questions. This tool works as a monitored forum but in an asynchronous way.

With all the presented tools, learners can create their own communities or participate in existing ones. They can speak with other learners or mentors in real time via the chat rooms as well as contact a 24-hour per day help desk via email or telephone. Learner chat rooms enable learners to discuss best practice and discuss course content to establish a virtual learner environment where groups can get together to discuss problems, courses etc.

Summary information source:

- Questionnaire responses
- Project Team online experience with the SmartForce platform and courses
- Lguide – e-learning course publishers
- www.smartforce.com
- www.skillssoft.com



Element K
www.elementk.com

148 Leadenhall Street
London
EC3V 4QT
UK

Element K was selected as a best practice with regard to Soft Skills & Informal Learning and, therefore, the company Overview, History, Management, Business, and Educational Focus summaries are presented in the previous section 5.2.2. Best Practice Soft Skills & Informal Learning.

Best Practice – Communities of Learning

The evaluation of e-learning sites, which resulted in the identification of Element K as a "best practices" provider in Communities of Learning followed a pre-established set of criteria, as previously described in this study. These criteria related to the existence of community "moderators", the application of group problem solving methods, synchronous and



asynchronous learning tools, the establishment of a mission statement or guiding principles, and more.

The evaluation of Element K revealed that the site was clearly among those that put more emphasis on developing Communities of Learning than many others. To begin with, the site's mission is well presented. If a given site is to attempt to make use of this tool for learning, it is clearly essential that it begin with setting a foundation or priority for such activity.

In practice, Element K has sought to establish Communities of Learning through community-based forums for all of their content areas. Their online instructor-led training (eILT) courses integrate these forums into the learning experience. Tools to promote these communities are multiple. Many eILT courses use an online conferencing system called Centra, for instance, and message boards ("Buzz Boards") – including links to assist with using and navigating message boards - also allow for learner discussion and communication. Additionally, in many cases learners can correspond with their instructors directly via e-mail. The site also offers live chat for technical assistance.

Element K's learning forums are administrated by both a moderator and a system operator. Moderators provide the impetus and direction for discussion, ensuring that learners contribute to the topic at hand and make good use of this tool for learning. These forums also support group problem solving activities, a valuable component of learning communities.

Learners enrolled in an Element K course are not obligated to take part in a learning community. The site offers self-paced tutorials that allow the learner to take a course at their own pace without any interaction from others. The site also provides additional reference materials for learners seeking further sources of information outside the framework of a course.

The diversity of Element K's communities also contributes to their value. The company has subscribers in 144 countries, and offers instruction to some 25,000 learners in classrooms annually. Element K offers more than 800 courses online, in 10 languages. These are both of the self-study and instructor-led formats. Roughly 90% of the sites learners come from client corporations, while 5% are from educational institutions and 5% are private individuals. In this way learners are afforded to opportunity to interact with individuals from a vast array of backgrounds. Element K's commitment to educational excellence and communities of learning is clear, and the site ranks second in this area among the pool of sites evaluated in this study.

Summary information source:

- Questionnaire responses
- Project Team online experience with the Element K platform and courses
- www.elementk.com



VCampus Corporation

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Overview

VCampus is a recognized pioneer in the online learning and education market. From its inception, VCampus has focused on delivering complete, scalable and flexible e-learning solutions that enable the creation, delivery and administration of high-quality, relevant courseware for adult learners.

VCampus is a platform-independent courseware delivery system that is highly customisable, supporting a variety of third-party tools such as Shockwave and Quicktime. VCampus is designed for easy access by learners, instructors, and training administrators.

History

The following timeline indicates the significant events and shifts in the development of VCampus:

1994

Nat Kannan founds University Online (UOL) by moving the course content and delivery infrastructure of his prior company, IMSATT, to the Internet.

1995

University Online launches e-learning offerings to clients

1996

University Online becomes UOL Publishing and has its initial public offering.

1997

UOL Publishing launches its first virtual campus.

1998

UOL Publishing expands its online, fully web-based, hosted offering, delivering 100,000 courses to approximately 73,000 learners at corporations, associations and institutions of higher education.

1999

UOL Publishing launches version 2.5 of its solution, dramatically speeding and simplifying navigation throughout the courseware distribution platform.

UOL Publishing changes its name to VCampus.

2000

VCampus brings in a new management team with a service industry focus.

2001

VCampus passes the "2 million courses delivered" mark.

VCampus becomes AICC, Section 508, WAI of the W3C, and LDAP compliant, and launches Version 3.6 of its solution.



VCampus launches Security College Online.

2002

VCampus becomes the leading e-learning ASP serving the civilian workforce in the Executive branch of the Federal Government.

Management

VCampus is a private corporation led by a well-qualified executive team. This team includes specialists from a variety of required disciplines related to administrating an effective e-learning company. From these Daniel Neal has served as a director and Chief Executive Officer of VCampus since joining the company in September 2000. From July 1998 until joining VCampus, Mr. Neal served in various positions with USinternetworking, Inc., including Vice President/General Manager; Senior Director, E-Commerce Partnering; and Senior Director, Acquisition Integration.

The company's board of directors, include: Narasimhan P. Kannan, Edson D. deCastro, Dennis J. Fischer, William E. Kimberly, Martin E. Maleska, Daniel J. Neal and John D. Sears. Mr. Kannan has served as VCampus' Chairman of the Board of Directors since he founded the company in 1994. Prior to founding the company, he founded IMSATT Corporation in 1984 and co-founded Ganesa Group, Inc., a developer of interactive graphics and modelling software, in 1981. He also served as a consultant to Booz Allen and Hamilton, Inc., the MITRE Corporation, The Ministry of Industry of the French Government, the Brookhaven and Lawrence Livermore National Laboratories, the White House Domestic Policy Committee on Energy and Control Data Corporation.

Educational Focus

The course catalogue lists 36 topic areas that include: Accounting and Finance , Certification , Community Safety , Desktop Applications , Finance , Healthcare , Human Resource Management , Information Security , Information Technology , Insurance , Legal , Management , Management Skills , Math , Misc , Office Skills , Operating Systems , Personal Development , Programming , Regulatory & Compliance , Sales & Marketing , Science , Software , Technical , Technical Trades , Telecommunications , Web Design , Web User , and Workplace Security. As shown by this sample, VCampus provides an extensive range of subject matters across several skill levels.

Best Practice – Communities of Learning

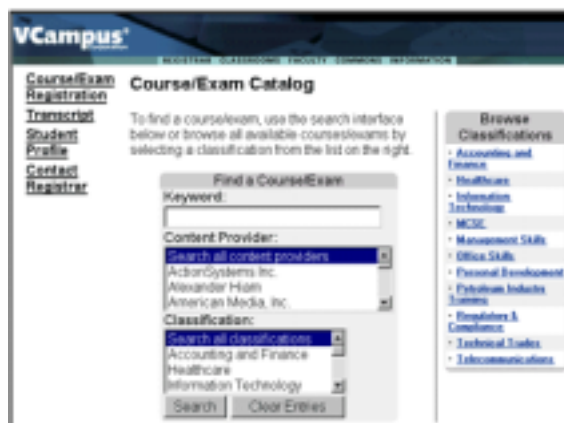
The evaluation of e-learning sites that resulted in the identification of VCampus as a “best practices” provider in Communities of Learning followed a pre-established set of criteria, as previously described in this study. These criteria related to the existence of community “moderators”, the application of group problem solving methods, synchronous and asynchronous learning tools, the establishment of a mission statement or guiding principles, and more.

The evaluation of VCampus revealed that there was a clear intention of developing Communities of Learning from the moment of enrolling into a course. This intention is put in action through the application of three main areas: a focused registration system, a well-constructed system of asynchronous tools and a set of useful synchronous tools:

Registration System

The VCampus is a web-based application consisting of a series of buildings or functions emulating a physical university campus. The first building is the Registrar Building. In the Registrar Building, learners may choose to register in courses from a library of over 200 off-the-shelf courses and any additional courses that may be tailored to company specific user groups. Learners may also view their transcript, download completion certificates, change their learner profile information, and contact the Registrar (administrator).

The Registrar uses this building to offer new courses, manage learner and instructor access and perform other administrative tasks such as registration, reporting and site customisation.

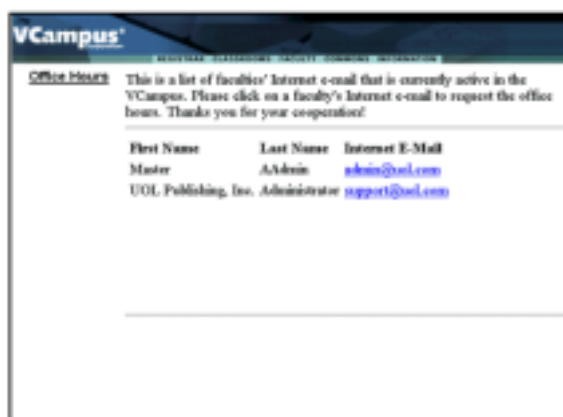


Asynchronous tools

VCampus asynchronous learning ranges from self-paced, self-study online courses to courses led by an actual instructor using collaborative tools such as e-mail, list serves, and web forums. All these tools are explored in order to build communities of learning with particular focuses. In this way VCampus can easily reach large groups of people and provide them with a quality education. Within the VCampus offer, asynchronous learning can stand alone as a learning method or can be combined with other learning methods such as live (synchronous) online events.

The Conference Area is an open discussion area monitored daily by the staff of VCampus Corporation. This open discussion area is utilized as a question and answer tool, a place to post comments, and an area in which learners can communicate with others. The Conference Area entrance screen prompts a username and password to identify the user.

The Faculty Building offers instructor email links, so learners may contact their instructors or course moderators with course-related questions. Links to Faculty home pages may also be placed in this building.



The Commons Building is a recreational area with diversions such as games and an online bulletin board.



Synchronous tools

VCampus applies some of the newer technologies and tools that have made synchronous, or "live," online learning a reality. In VCampus courses these tools are often paired with asynchronous learning methods in a blended solution. These real-time interactive learning events add a new dimension to e-learning, allowing real-time application of knowledge to complex situations, live interaction with facilitator and other participants exposing classes in a format that is more familiar to most learners. There are also online threaded discussions for fostering ongoing learning, coaching and communications among participants and a dedicated instructor.

Some examples of tools that are specific to VCampus and justify VCampus' significantly higher assessment score with regard to Communities of Learning are:

- VMeeting (powered by WebEx), that allows the use of: polling, chat, shared whiteboard, application sharing, and record/replay.
- VMentor live support
- Teleconferencing and Videoconferencing

In general, VCampus applies a range of tools in a manner that allows for extremely effective development of communities of learning.

Summary information source:

- Project Team online experience with the VCampus platform and courses
- www.vcampus.com



6. Conclusions and Reflections

6.1 Conclusions

The activity of selecting e-learning sites provided a final pool of 40 “true” e-learning sites that service the general public. It is interesting to note that of this final pool of 40 sites there was a diverse group of organisation structures (private for profit, associations, etc) but no traditional higher education institutions represented. This merely shows that higher education institutions are not leveraging the search engines for market penetration. The method for selecting the e-learning sites has significant drawbacks due to limiting the initial pool to those e-learning sites with the ability to leverage the leading search engines. The results show the importance put on search engines by e-learning sites with a mass marketing approach.

There are several organisations including Framework Programme projects that have developed technical standards such as SCORM and LOM for the e-learning industry; although, there is a lack of coherent and globally accepted criteria to evaluate and benchmark the e-learning industry with regard to effective internet based e-learning sites. This need is discussed in more detail within the “European Community Parallel Activities in e-Learning” section of this report. The wide range of views with regard to relevant criteria is apparent. This study sites the American Society for Training and Development (ASTD) as the leading organisation in the United States of America with regard to certification of asynchronous products, but there are many other organisations that have developed their own evaluation and certification processes both in Europe and abroad. It is the project team’s hope that further focus on this issue by the European Commission will drive a set evaluation system accepted by the entire European Community. Nevertheless, the criteria applied within this study provided some interesting conclusions.

The assessment results of the final pool of sites with regard to structures and applications were well distributed. There were no strong outliers that would signify a large gap in the e-learning industry. As would be expected examples across the spectrum of effective sites were represented.

Of the three areas considered for best practices (Learner Models, Soft Skills and Informal Learning, and Communities of Learning), the e-learning sites overall evaluated extremely low with regard to Soft Skills and Informal Learning. The leading site, OnlineExpert, resulted in a score of 71,5 out of 100. It is apparent that the most challenging environment for an e-learning site to create is one that encourages the development of soft skills. This is an obstacle for the industry that requires further investment in tools to foster the development of soft skills by overcoming the limitations of the e-learning training interface.

On the other hand, the e-learning industry has applied tools and applications that support the learner model concept as reflected by the high evaluations in this best practice area. There are now very good examples of applying the current technology effectively within the module course structure that account for the learner’s capabilities, learning goals, and preferred learning environment. This is accomplished through greater control of the learning experience by the learner. The challenge is implementing technology that allows the e-learning site greater dynamic control of the learning experience based on the learner’s profile and learning performance.

As with the best practice area Soft Skills & Informal Learning, the study identified a limited number of sites taking full advantage of the tools available to foster Communities of Learning. The sites that ranked highest in this area were SmartForce and Element K. These sites should be commended on their structures and applications that encourage group learning. Although it is important to keep in mind that the tools provided are only effective if utilized by the learners, which is the justification for the criteria – Level of Interaction. This poses an interesting question: what online learning activities draw the interest of most learners? To answer this question a much different methodology would need to be applied that is based on surveying learners over a significant period of time that take courses on a preselected limited



number of e-learning sites. The result of such an analysis would provide key information on the demand of the market for specific technology based tools.

6.2 Reflections

The initial approach taken to identify e-learning sites more easily accessible or visible to the general public limited the results to sites that best leverage search engines and commonly accepted English terms. The project team's justification for this method was based on three e-learning industry and market characteristic related assumptions:

1. Search engines are the most common method utilized by the general public for identifying Internet sites. This is inline with the project scope – “self-learning for work”.
2. Leading e-learning sites have knowledge to leverage search engines and directories to attract end users.
3. The term “e-learning” is a universal term applied across Europe and the United States for Internet based learning.

In retrospect, the project team would add further terms common to the 11 official languages of the European Union to be less exclusive; although, 12,5% of the resulting sites were non English based or multilingual. The method of identifying e-learning sites through utilizing the leading search engines is possibly the only effective method. Other methods would be highly restrictive such as surveys of members of relevant associations (i.e. European Distance Education Network – EDEN). The survey method would rely on a significant response rate, which is never the case with regard to participation in evaluations as seen by the low response rate to the questionnaire distributed within this study.

Selecting the evaluation criteria was the most critical aspect of the study. The resulting criteria possess some subjective components, which the project team decided were unavoidable due to the best practice areas. The subjective components were limited by applying a simple rating system. The rating system from 1 to 3 in most cases required significant differences between sites to account for different ratings. The subjectivity was further limited through a review of the results by the project team to ensure consistency between evaluators. However, the project team realizes this subjectivity exists and has a limited impact on the results.

The project team also realized early in the study activities that it would be challenging if not impossible to evaluate what may be the most important criteria of e-learning sites: the true impact on the learner. This is one strong drawback of the e-learning industry. The industry is not transparent with regard to true online activity and satisfaction of the learner. Many of the claims made by the e-learning sites could not be substantiated. More importantly, the sites in general would not provide specific information with regard to such aspects as site activity, learners per course, satisfaction level of the learners, etc. The inability of acquiring this specific information limits the capability to accurately measure an e-learning site's general performance and ability to provide effective training.

Nevertheless, taking these reflections into consideration the results of this study can provide support to the actions to be carried out within the eLearning Call of September 2002 as well as the e-learning industry through encouraging the implementation of tools that provide a well rounded training experience.



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ANNEX 1 – Structures Assessment Results

	E-LEARNING SITE	LINK	Objectiveness of the Mission	Uniqueness of the design and of the structure of the interface	Aesthetics of the web site	Usability and Navigation	Adaptability to the web	Appropriateness of the Courses structure	Support availability	Total
1	Element K	www.elementk.com/	3	3	5	5	5	5	3	29
2	Digital Think	www.digitalthink.com/	3	3	5	5	5	5	3	29
3	Smartcanal	www.smartcanal.com/	3	2	5	5	5	5	3	28
4	NETg	www.netg.co.uk/	3	2	5	5	5	5	3	28
5	Private Lessons Channel	www.privatelessons.net	3	3	4	5	5	5	3	28
6	easycando	www.easycando.com	3	3	4	5	5	4	3	27
7	e-learning-centre	www.e-learning-centre.com	3	2	5	5	5	4	3	27
8	Center for Interactive Financial Training	www.cift.org	3	3	5	4	5	4	3	27
9	KnowledgePool	www.knowledgepool.com/	3	2	5	5	5	4	3	27
10	MindLeaders.	www.dpec.com/	3	3	5	4	5	4	3	27
11	Online-Learning.com	www.online-learning.com	3	3	4	5	4	5	3	27
12	Learn2.com	www.learn2.com	3	3	5	3	5	4	3	26
13	Eno.com	www.eno.com	3	3	4	4	5	4	3	26
14	ICUS -	www.icus.net/	3	3	4	4	5	4	3	26
15	Online Expert Training	www.onlineexpert.com	3	2	5	5	5	3	3	26
16	VCampus	www.vcampus.com	3	3	4	4	5	4	3	26
17	Global Knowledge - Nortel Training	get.globalknowledge.com/norteltraining	3	3	4	4	4	4	3	25
18	SoftSkill / SmartForce	www.smartforce.com/	3	2	4	4	5	4	3	25
19	SyberWorks	www.syberworks.com/	3	3	3	3	5	5	3	25
20	MindLeaders-	www.mindleaders.com/ -	2	2	4	5	5	4	3	25
21	eLearning Agency	www.elearningagency.com/	2	3	4	4	5	4	3	25



22	1-stoptraining.com	www.1-stoptraining.com	3	3	4	3	4	4	3	24
23	Prince2 Academy	www.prince2academy.com	3	2	3	4	4	5	3	24
24	ActiveEducation	www.activeed.com/	3	2	4	4	4	4	3	24
25	INTECH Interactive Technologies, Inc	www.intechinc.com/	2	2	4	4	5	4	3	24
26	Almaris E-Learning Systems	www.almaris.com/	3	2	3	4	5	4	3	24
27	Human Equation, The	www.thehumanequation.com	3	3	4	4	5	3	2	24
28	WebCT.com	www.webct.com/	3	2	3	3	5	4	3	23
29	e-LearningCenter	www.e-learningcenter.com/	3	1	3	3	5	4	3	22
30	Academee	www.academee.com/	3	1	4	3	4	4	3	22
31	GeoLearning Inc.	www.geolearning.com/	3	3	2	4	5	3	2	22
32	Laragh CourseWare	www.laragh.com/	3	2	3	4	5	3	2	22
33	Ascolta - /	www.ascolta.com	2	3	3	3	4	4	3	22
34	MasterGraphics	www.masterg.com/e-learn.html	3	3	2	4	5	3	2	22
35	blueU.com	www.blueu.com	3	2	4	4	3	3	3	22
36	Cisco Partner E-Learning Connection	http://www.cisco.com/pgc-bin/front.x/wwtraining/CELC/index.cgi?action=CourseList	3	1	2	4	4	4	3	21
37	BetterManagement.com	www.bettermanagement.com/	2	1	2	3	4	3	3	18
38	IT Service Management	www.itsm-learning.com	2	2	3	4	3	2	2	18
39	Diplomatic Language Services, Inc.	www.dls-inc.com/	3	1	2	4	2	1	2	15
40	University of Phoenix Distance Learning Online	www.university-of-phoenix-distance-learning-online.com	3	1	3	3	n.a.	n.a.	3	13



ANNEX 2 – Applications Assessment Results

	E-LEARNING SITE	LINK	Technological characteristics Audio, video, animations, charts	Direct Collaboration		pedagogical tools (exercices, quizz, ...)	Total
				degree of interaction with other students	contact with tutor		
1	e-learning-centre	www.e-learning-centre.com	5	4	4	5	18
2	Smartcanal	www.smartcanal.com/	4	4	4	5	17
3	Digital Think	www.digitalthink.com/	4	4	4	4	16
4	SkillSoft / SmartForce	www.smartforce.com/	4	4	4	3	15
5	Eno.com	www.eno.com	4	4	4	3	15
6	Element K	www.elementk.com/	4	3	4	4	15
7	ICUS -	www.icus.net/	4	3	4	3	14
8	Private Lessons Channel	www.privatelessons.net	5	2	2	4	13
9	Learn2.com	www.learn2.com	4	3	3	3	13
10	Center for Interactive Financial Training	www.cift.org	3	3	4	3	13
11	Online Expert Training	www.onlineexpert.com	4	1	3	5	13
12	SyberWorks	www.syberworks.com/	4	2	2	5	13
13	KnowledgePool	www.knowledgepool.com/	5	1	2	4	12
14	NETg	www.netg.co.uk/	4	1	2	4	11
15	easycando	www.easycando.com	4	1	2	4	11
16	MindLeaders	www.dpec.com/	5	1	1	4	11
17	VCampus	www.vcampus.com/	4	1	2	4	11
18	e-LearningCenter	www.e-learningcenter.com/	5	1	2	3	11
19	Academee	www.academee.com/	2	2	4	3	11
20	Global Knowledge	get.globalknowledge.com/nortel training	5	1	2	2	10
20	Global Knowledge	get.globalknowledge.com/nortel training	5	1	2	2	10



21	Online-Learning.com	www.online-learning.com	4	1	1	4	10
22	Prince2 Academy	www.prince2academy.com	3	2	3	2	10
23	ActiveEducation	www.activeed.com/	4	1	2	3	10
24	INTECH Interactive Technologies, Inc	www.intechinc.com/	2	2	2	4	10
25	GeoLearning Inc.	www.geolearning.com/	5	1	1	3	10
26	Laragh CourseWare	www.laragh.com/	4	1	2	3	10
27	1-stoptraining.com	www.1-stoptraining.com	3	1	2	3	9
28	MindLeaders	www.mindleaders.com/ -	3	2	2	2	9
29	eLearning Agency	www.elearningagency.com/	3	1	2	3	9
30	WebCT.com	www.webct.com/	5	1	2	1	9
31	Almaris E-Learning Systems	www.almaris.com/	4	1	1	3	9
32	Ascolta	www.ascolta.com	3	1	1	4	9
33	MasterGraphics	www.masterg.com/e-learn.html	4	2	2	1	9
34	Human Equation	www.thehumanequation.com	3	1	2	2	8
35	blueU.com	www.blueu.com	3	1	1	3	8
36	Cisco Partner E-Learning Connection	http://www.cisco.com/cgi-bin/front.x/wwtraining/CELC/index.cgi?action=CourseList	4	1	1	2	8
37	BetterManagement.com	www.bettermanagement.com/	1	2	3	2	8
38	ITIL eLearning	www.itsm-learning.com	4	3	3	2	12
39	Diplomatic Language Services	www.dls-inc.com/	2	0	0	3	5
40	University of Phoenix Distance Learning Online	www.university-of-phoenix-distance-learning-online.com	n.a.	n.a.	n.a.	n.a.	0



ANNEX 3 – Best Practices Assessment Results

3.1 Learner Models

#	E-LEARNING SITE	LINK	Pretest option Skills gap analysis	Student flexibility	Control screen info	Defined objectives performance	Defined objectives standards	Tutor	Self assessme	Integrates content	Document management	Help facilities	Simple user interface	TOTAL
1	Online Expert	www.onlineexpert.com	1	45	1	1	1	1	1	45	40	1	45	94,5
2	KnowledgePool -	www.knowledgepool.com/	1	30	1	1	1	1	1	35	30	1	35	84,5
3	e-learning-centre	www.e-learning-centre.com	1	5	1	1	1	1	1	45	10	1	50	81,5
4	Eno.com	www.eno.com	1	45	1	1	1		1	45	40	1	50	80,5
5	SkillSoft / SmartForce	www.smartforce.com/	1	45	1	1	1		1	45	40	1	50	80,5
6	Digital Think	www.digitalthink.com/	1	35	0	1	1	1	1	35	25	1	35	79,5
7	SyberWorks	www.syberworks.com/	1	40	1	0	0	1	1	35	25	1	25	76
8	NETg UK	www.netg.co.uk/	1	30	1	1	0	0	1	35	30	1	35	64,5
9	Online-Learning.com	www.online-learning.com	0	30	0	1	1	1	1	35	0	1	20	60,5
10	Smartcanal	www.smartcanal.com/	1	40	0	1	1	0	1	25	20	1	25	59,5
11	ICUS	www.icus.net/	1	40	0	1	0	0	1	35	10	1	45	59,5
12	easycando	www.easycando.com	1	45	1	1	0	0	1	25	10	1	30	59,5
13	MindLeaders.	www.dpec.com/	1	30	1	1	1	0	1	20	0	1	35	59
14	Learn2.com	www.learn2.com	1	35	0	1	0	0	1	35	10	1	45	58,5
15	Global Knowledge - Nortel Training	get.globalknowledge.com/norteltraining	1	30	1	0	1	0	1	30	30	1	0	58,5
16	ActiveEducation	www.activeed.com/	1	20	0	1	1	0	1	30	0	1	30	54
17	Center for Interactive Financial Training	www.cift.org	0	25	0	1	0	0	1	35	40	1	25	48,5
18	Vcampus	www.vcampus.com/	0	25	1	1	0	1	0	25	5	1	35	48
19	Element K	www.elementk.com/	0	0	0	1	0	1	0	40	5	1	50	45,5
20	Private Lessons Channel	www.privatelessons.net	0	40	0	1	0	0	0	30	0	1	40	32,5



3.2 Soft Skills & Informal Learning

#	E-LEARNING SITE	LINK	Activity	Reward	Transfer	Environment	Communic. Interactivity	Motivation	Student centered	TOTAL
1	Online Expert Training	www.onlineexpert.com	45	20	45	45	30	20	45	71,5
2	Element K	www.elementk.com/	45	0	40	40	40	35	45	70
3	Online-Learning.com	www.online-learning.com	25	45	25	25	35	30	35	64
4	Center for Interactive Financial Training	www.cift.org	35	10	50	40	15	35	45	63
5	KnowledgePool -	www.knowledgepool.com/	30	20	40	30	25	40	40	63
6	Eno.com	www.eno.com	30	10	40	40	30	30	40	62
7	SkillSoft / SmartForce	www.smartforce.com/	30	10	40	40	30	30	40	62
8	Digital Think	www.digitalthink.com/	40	10	40	35	15	40	40	60
9	e-learning-centre	www.e-learning-centre.com	30	10	40	50	10	40	45	59,5
10	Vcampus	www.vcampus.com/	20	10	25	40	10	35	45	49
11	ICUS	www.icus.net/	30	10	40	40	0	20	35	46,5
12	Smartcanal	www.smartcanal.com/	35	5	40	25	5	15	40	46
13	NETg UK	www.netg.co.uk/	35	35	30	15	0	10	25	42,5
14	MindLeaders	www.dpec.com/	25	45	20	15	0	10	10	35
15	Private Lessons Channel	www.privatelessons.net	20	0	35	35	0	15	25	34
16	SyberWorks	www.syberworks.com/	35	0	10	15	15	10	30	33,5
17	easycando	www.easycando.com	15	5	35	15	15	5	10	29,5
18	ActiveEducation	www.activeed.com/	10	15	20	15	5	25	15	28
19	Global Knowledge	get.globalknowledge.com/norteltraining	20	0	20	15	15	10	15	27,5
20	Learn2.com	www.learn2.com	10	0	0	35	0	15	25	20,5



3.3 Communities of Learning

#	E-LEARNING SITE	LINK	Clearly stated purpose	Experienced moderators	Registration system	Synchronous tools	Asynchron. tools	Group problem solving	Calendar	Level of interactivity	TOTAL
1	Eno.com	www.eno.com	45	1	50	45	45	20	1	40	85,5
2	SkillsSoft / SmartForce	www.smartforce.com/	45	1	50	45	45	20	1	40	85,5
3	Element K	www.elementk.com/	45	0	40	40	45	40	1	40	71
4	Vcampus	www.vcampus.com/	0	1	35	45	40	30	0	30	64,5
5	Online-Learning.com	www.online-learning.com	25	1	25	35	35	10	1	30	64,5
6	Digital Think	www.digitalthink.com/	40	1	40	30	45	0	0	30	64
7	Center for Interactive Financial Training	www.cift.org	40	1	35	35	40	0	1	15	61
8	KnowledgePool	www.knowledgepool.com/	25	1	35	30	35	0	0	10	48
9	SyberWorks	www.syberworks.com/	0	0	30	30	30	0	0	35	38,5
10	Online Expert Training	www.onlineexpert.com	0	1	40	0	20	0	0	5	29,5
11	Global Knowledge	get.globalknowledge.com/norteltraining	0	1	10	20	15	0	0	0	26
12	e-learning-centre	www.e-learning-centre.com	0	0	50	35	0	0	0	10	25,5
13	ActiveEducation	www.activeed.com/	0	1	30	0	5	0	0	5	24,5
14	ICUS	www.icus.net/	0	0	20	0	20	0	0	10	13
15	Smartcanal	www.smartcanal.com/	0	0	40	0	0	0	0	0	8
16	MindLeaders	www.dpec.com/	0	0	20	0	5	0	0	5	7,5
17	NETg UK	www.netg.co.uk/	0	0	25	0	0	0	0	0	5
18	Private Lessons Channel	www.privatelessons.net	0	0	15	0	0	0	0	0	3
19	Learn2.com	www.learn2.com	0	0	15	0	0	0	0	0	3
20	easycando	www.easycando.com	0	0	0	0	0	0	0	0	0