SOCRATES ODL

Project no 56544-CP-1-98-1-NO-ODL-ODL

WORKPACKAGE 1 (WP1)

MODELS FOR SUPPLIER NETWORKS

Teach yourself over the Net: Organisations providing Open and Distance Learning

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1. Introduction

EuroCompetence (http://www.tisip.no/ec) is a project funded in the context of the European Commission, "SOCRATES" programme. Six Higher Educational Institutions trough Europe and one Research foundation are collaborating to develop and try out a flexible Open and Distance Learning (ODL) model for delivering further studies to adult learners. As the title indicates, the model will cover the need for competence among employees in industry and public sector who need to collaborate with other companies and institutions in Europe. By using action research the EuroCompetence team is developing an experimental pilot project to increase the knowledge of how to change traditional, structured, offer based institutions into institutions driven by unstructured demands coming from the industry and public organisations or from individuals. In this respect a study program is designed and developed based on the following four subject areas which are considered crucial:

- Information technology in general and the use of Internet in particular.
- Methods and tools for professional collaboration over Internet.
- EU standards, programmes, rules for collaboration etc. in addition to languages and culture.
- Practical skills and knowledge achieved by project work.

This report is a product written in the context of workpackage 1 (WP1) of the project. The goal of WP1 was to collect updated information and explore the nature of collaboration between universities and organisations in Europe, USA, Canada and other countries worldwide to form networks of ODL providers. Special emphasis was given on those providers that are using Information and Communication Technology (ICT) based techniques for ODL.

The rest of this report is structured as follows:

Section 2 includes a brief history on Distance Education together with a general introduction aiming to clarify terms and concepts regarding Open and Distance Learning

Section 3 reports on going research and development projects (EU mostly) which explore ODL models and approaches.

Section 4 looks at organisational aspects of ODL providers. These providers are grouped into five main categories to make it easier to study their way of functioning and how they form networks in providing Open and Distance learning.

Section 5 gives some remarks on the types of ODL courses/modules offered by these providers and the models of pedagogy used.

Section 6 is concerned with the technical support and financial aspects of ODL

Section 7 provides a summary of the report together with conclusions

There are three appendices attached to the report including links to ODL providers, links to ODL projects and references on ODL respectively. The goal of these appendices is to give characteristic examples which can be used for a deeper understanding of the issues discussed in the report. In order to keep these examples and references up-to-date and add new ones as they become available the appendices are also provided through URL pages administrated by the EuroCompetence team (see http://demosthenes.it.teithe.gr).

Appendix 4 includes a questionnaire addressed to ODL providers. It has been designed and it is used by the EuroCompetence team in order to formally contact ODL providers worldwide.

2. Brief History of ODL - Terminology

Open and Distance Learning has been part of the educational delivery systems worldwide for more than hundred years. But today we live in a period of rapid changes in the domain, since most of the educators and policy makers realise the central role that Information and communication technologies play in the design, delivery and support of ODL (Cresson, 1995; Dearing, 1997). The rapid expansion of the Information and Communication technologies are also transforming the established procedures within enterprises as well as the way people work. These new technologies serve the demand for new knowledge and advanced skills to be acquired, while their use give the opportunity (and rather impose) to the organisations to become networked and geographically distributed at national and international level. In addition, costs for specialised education and training in the traditional form continue to rise for both the institutions which provide the training as well as for the organisations which wish to train their employees. As a result, bringing participants in the same classroom for company training or university courses becomes on one hand extremely inconvenient, on the

other hand physically impractical for those who cannot visit traditional schools and certainly most of all financially expensive.

All the above factors make it necessary to design and implement the educational and training system in a more flexible and distributed manner and this is why most of the countries are seeking to extent their educational system with flexible and distance educational/learning activities. This applies not only to the formal educational system (i.e Higher education) but also to Continuous Education to Lifelong Learning and to Corporate Training activities as well.

Flexible and Distance Learning, also called **Open and Distance Learning (ODL)**, is defined as a planned teaching/learning experience that uses a wide spectrum of technologies to reach learners at a distance and is designed to encourage learner interaction and certification of learning (Sherry, 1995; Lawhead *et al.*, 1997). Distance Education is a mode of instructional delivery that does not constrain the student to be physically present in the same location as the instructor. Different varieties of distance education can be defined depending on the level of control that learners have over the time, the location, the content and the method of study.

In ODL the instruction could be **synchronous**, meaning that the communication between tutor and learner is simultaneous, or **asynchronous** which means that the student is able to interact at any time. The ODL instruction could also be based on a mixture of the above two modes.

The term **Distance Learning** is often interchanged with that of **Distance Teaching** or **Distance Education**. Distance teaching and distance learning are considered the two important components of distance education. It has to be noted that since institutions/instructors control educational delivery while the student is responsible for acquiring the knowledge, distance Learning should be considered the result of distance Education.

The earliest form of distance education was that of giving courses through mail correspondence. Then in the middle of this century instructional radio and television became very popular. In the 1970's professionally designed and produced television series introduced students to new subject matter as a complement to the classroom curriculum. Some of the universities have also implemented on-campus interactive television networks for the distribution of this form of teaching material. Since 1980 distance education programs have integrated many new technologies including satellite,

interactive compressed video, specially designed computer software and voice response systems. Nowadays due to the extensive use of Information and Communication Technologies (ICTs) to implement this form of education, distance education is also often referred to as **ICT-based Education** (Porter, 1997). On-line education through computer-mediated communication (CMC) can provide individuals, irrespective of their geographic locations, with high quality education customised to their personal interests and lifestyles. Internet/WWW, Electronic Mail (E-mail), Newsgroups, Bulletin Board Systems (BBSs), telephoned based Audio conferencing, Videoconferencing with 1- or 2-way video and 2-way audio (via broadcast, cable, telephone, fibber optics, satellite, microwave or closed-circuit TV) are among the methods currently used to support both the delivery of the learning material and the interaction between tutor and student.

During the last five years Internet/WWW is considered the most cost/effective solution for supporting the process of Open and Distance Learning. Due to this fact the term **Web-Based Learning** is often used as a synonym to ODL (Lawhead *et al.*, 1997). The main reason for which the Internet/WWW predominates is that it differs from any other technological medium. It is cheap, convenient, versatile, popular, computer-interactive, and used worldwide. Access to learning resources has never been as easy as it is via the Internet. Many course providers worldwide offer courses on various topics through the use of the Internet and the World Wide Web. The current technology allows: course material to be electronically distributed, communication between students and instructors as well as between students themselves to be established (MECPOL, 1998), on-line digital libraries to be accessed (Schatz & Chen 1999), etc. Since all of the facilities have the potential to efficiently amalgamate text with sound, image and digital video in a hyper-structure form, Internet/WWW will keep evolving as the future's most effective medium for supporting ODL.

Another term that has experienced some recent popularity is **Distributed Education**. This term may represent the trend to utilise a mix of delivery modes for optimal instruction and learning. In such a mode except for students being at a distance the delivery of the education could also be offered by a number of tutors that may be geographically distributed.

Today, maybe the most successful term describing all of the characteristics of ODL is that of **Networked Open Learning (NOL)** or simply **Networked Learning (NL)** (Banks *et al.*, 1998; McConnel, 1999). It is used to cover all forms of educational provision in which the following features are crucial:

- people ('tutors' and 'learners') communicate using computers linked to networks
- access by people to resources stored on computers linked to networks

It is also used to denote a paradigm shift in flexible learning where computer technology and networks in particular are used to facilitate new forms of learning which are not only learner-centred but are also strongly based on collaborative approaches (McConnel, 1994).

All the above together with the methodologies emerged from the area **of Computer Assisted Learning (CAL)** constitute what it is called nowadays **Advanced Learning Technologies**.

It has also to be noted that ODL is far from being a process without problems. Poor pedagogical models used, is a major problem. A lot of the ODL courses were the result of the quick repackage of old traditional course material to be offered over the net (Lawhead *et al.,* 1997). Problems may also arise either at a local level, i.e. administration, delivery and support of a particular ODL course, or at a global level, i.e. organisation of the educational providers and selection of ODL courses. Non-active participation, high early drop out rates for the courses and information overload are among the consequences reported most often due to the inability to effectively face the above problems. The opponents of ODL are mostly concerned about:

- loss of instructor intellectual property
- increased workload demands on educators and
- the commercialisation of education

3. Research and Development projects on ODL

ODL is currently connected with most of Basic Research areas of Science of education on the one hand and the Information and Communication technologies on the other hand. These areas include:

- Models of Pedagogy
- Computer Assisted Learning
- Hypertext and Hypermedia Systems
- Human Computer Interaction
- Telecommunications – Computer Networks
- Mass Storage Devices etc

In the field of applied research and technological development (R&D) E.U. is also funding a lot of projects that are related to Open and Distance Learning and to Advanced Learning Technologies.

JITOL, JANUS and COLEARN in the context of Telematics for Education and Training (DELTA-programme) funded under the TELEMATICS APPLICATIONS (sector 4) of the Fourth Framework Programme (1994-1998).are examples of such projects that have been successful in the near past. Project work is on the following areas:

- Development of network independent software tools to support distributed ODL
- Development of the Infrastructure for Distributed virtual Classrooms
- Multimedia environments and Videoconferencing to increase interactively
- Modular Training Systems for SMEs and Universities etc.

See appendix 2 for a description of selective projects covering these areas.

Other EU supported Research projects (e.g. in the framework of ESPRIT) based on multi-disciplinary research (such as Information Retrieval, DBMS, Artificial Intelligence, Human Computer Interaction) on new methods and techniques for information storage and retrieval are also of great importance and relevance to ODL. For more information see http://www2.echo.lu/telematics/education/en/projects/projects/projects.html

Similar and more advanced projects are underway within the Fifth Framework Programme and in the context the of Information Society Technologies Programme which provides a single and integrated programme that reflects the convergence of information processing, communications and media technologies, activities strongly related to ODL. (see http://www.cordis.lu/fp5/home.html)

Special sections of the Socrates and Leonardo programmes are also advocated to the implementation of Open and Distance Learning. Project funding is guided in a number of domain areas of ODL including Collaborative Learning, Innovative pedagogic approaches, Virtual Classroom activities etc. A good source of information on these projects and their products is the Socrates/ODL Projects Database (see http://siu.no/isoc).

In the United States of America the situation concerning project funding for ODL is quite different from that of the European Union. It seems that there is no comprehensive “centralised” strategy for implementing Distance Learning. Although that there are a lot of funds available, there are also a lot of federal and state agencies as well as Universities and research organisations competing trying to run similar projects. The

result is that available funds are spread very thin and nobody has enough funding. One of the best sources of information on distance education research and development in USA is the United States Distance Learning Association - USDLA (see http://www.usdla.org).

The situation seems to be more systematic in Canada. Project funding is implemented in a geographical - regional based model, which means that the different provincial governments in Canada are providing research funds for the local organisations and institutions implementing ODL. A good example of centralised carefully planed research funding is that of the New Brunswick province (see http://teleeducation.nb.ca).

4. ODL Providers: Organisational aspects

All of the ODL providers are aiming at providing an infrastructure which assists learners in all stages of their distance learning. At the current stage we can say that students have in front of them a Virtual University (VU) and present themselves to virtual classrooms in order to follow their courses. In this paragraph we try to identify what is behind this Virtual University concept. In other words what are the different structures (educational, administrative and technological) used by VUs to assist the various stages of ODL.

It is generally accepted that since we are in a period of a paradigm shift from individualised ODL models to Collaborative Networked Learning ones, collaborations are becoming the key to our educational future. All of the ODL providers seem to understand that they are living in a global educational market and are seeking for collaborative agreements which will allow them, to some extent, to form “ODL supplier Networks ” These collaborative agreements include:

- Articulation agreements, which allow the partner's programs to "latter" into VU degrees.
- Agreements allowing the delivery of the VU courses on-site at partner institutions.
- Agreements aiming at Joint development programs.

In this respect it has to be noted that the categorisation of the ODL providers that follows could not be considered a rigid classification but rather it is done for the practical purpose of studying their characteristics.

4.1 Open Universities (OUs)

In Europe and world-wide hole institutions of higher education have been dedicated in providing distance education at the post secondary level for decades. This type of institutions represent the most centralised model of providing Open and Distance Learning. The whole structure of these institutions (educational, administrational and financial) is organised to support the ODL procedures. Open Universities have:

- Full time specialist staff for course development
- Full time specialist staff for student support services
- Heavy investment in plant, printing machinery, audio-video studios or access to government support staff

In most of the occasions OUs have study (or learning) centres situated in different regions nationally and sometimes internationally as well.

Open Universities are capable of enrolling tens or even hundreds of thousands of students. They are mostly aiming to adult learners giving them the flexibility of devising a personalised study schedule which is most pertinent to their way of living. OUs offer to their students:

- Studies towards a specific degree (e.g. BSc, MSc or PhD)
- Specialised course modules which are formed by the combination of different courses selected to meet the personal needs and preferences of the students
- Academic and Professional recognition. OUs have a very good reputation for the quality of their studies and in most of the occasions their courses are accredited by official academic bodies.

It has to be noted that at the present time the tutoring support of many of the ODL courses is not strongly based on information and communication technology. The main reason for this is that OUs have developed these courses long before. However it is apparent that OUs are carefully adapting their course material and support to be ICT based.

Certainly the institution which is the most representative of this kind of ODL provider is that of UK's Open University (see http://www.open.ac.uk/cover.htm) It is worth mentioning that in UK there are more than 218,000 people currently studying with the Open University. Of these 141,000 are taking undergraduate level courses while another 10,000 are registered for postgraduate degrees. There are also professional development programmes in management, education, health and social welfare, manufacturing and information technology applications. Specially prepared high-quality

ODL materials are delivered to the students in their own homes or places of work by post, by computer networks and via national BBC broadcasts. Local support is provided by a network of 7,000 tutors who operate through a structure of 13 Regional Centres. Public funds of 200 million pounds per year provided through the Higher Education Funding Council represent more than half of the finance while student fees, research grants etc. make up the remainder.

Other representative Open Universities are:

- The National Centre for Distance Education of France (http://www.cned.fr)
- Spain UNED (http://info.uned.es/)
- Norway NKS (http://www.nks.no/wge)
- The Open University of Canada (http://www.athabascau.ca)
- The Open University of Hong Kong (http://www.ouhk.edu.hk)

See in appendix 1 for a brief description of these OUs

4.2 Universities having an ODL department or centre

An increasing number of traditional universities have start to offer ODL courses as a supplement to their face-to-face programs

Distance education became integral to the research and service elements of the University's mission; it helps the universities reach out to a broader community and, at the same time, to bring worldwide expertise to its campuses. Universities see ODL as a new way to grow well beyond the University's campus limitations to distribute their main product -education- either to their enrolled students or to other non traditional learners

- The ability to serve students in all parts of the world,
- increasing student flexibility regarding the time, place and pace of study,
- creating a highly interactive, learner-centered environment that is marked by increased access to faculty expertise and increased accesss to information resources

are among the goals which one can find in their mission statement.

It is estimated that currently more than 50% of the U.S.A. universities offer some form of ODL courses and a lot of them a complete degree program.

From the functional point of view:

- For universities having distributed campus facilities ODL offers on-line access to university services and programs operated by the parent, place-based institution

- In most of the occasions ODL does not replaces formal educational activities, but takes the form of curriculum enrichment modules
- Credits earned through online courses are most of the times accepted at the University hosting the ODL courses to be combined with credits earned in the context of a traditional curriculum. These credits may also be accepted from other Universities or Colleges toward their degree requirements.

The following are characteristic examples of Universities offering ODL courses through specialized ODL departments incorporated in their structure:

- **Pennsylvania State Distance Education** (http://www.cde.psu.edu/de)

Penn State has a long tradition of leadership in distance education. In 1892, Penn State was one of the first universities to develop a program of correspondence study. Over the years, Penn State has experimented with many technologies, from courses offered nationally via radio in the 1920s to an on-campus interactive television network that helped the University respond to the influx of GI Bill students in the 1950s, to the use of public broadcasting and cable television. Since the 1980s, distance education programs have integrated many of the new technologies, including satellite, interactive compressed video, computer software, electronic mail, voice response systems, and, most recently, the World Wide Web. By the 1990s, distance education at Penn State included nationally delivered professional graduate degrees, an international certificate program in distance education, continuing professional education workshops via satellite, and, increasingly, resident instruction courses offered among Penn State campuses.

- **University of Phoenix** (http://www.uophx.edu/online/about.htm)

This is a private university (the second largest in USA) which has a specialised department - UOP Online - offering ODL courses completely over the net. UOP Online was formed on 1989 and currently enrolls 1,700 degree seeking distant students. UOP Online provides a group based computer mediated learning environment offering the kind of interaction and support which take place in a traditional face-to-face seminar style classroom. All of the online students are adults taking the courses leading to a graduate or postgraduate degree from their home or workplace.

- **C SALT** (Centre for Studies in Advanced Learning Technology), Lancaster University) (http://www.lancs.ac.uk/users/edres/research/csalt/csalt.html)

The aim of C SALT is to provide a focus for research in advanced learning technology (ALT), a field in which Lancaster University has a well-established international reputation. A number of ODL courses are provided in selected areas of study.

More examples of institutions worldwide which offer ODL courses can be found in appendix 1.

4.3 On-line Universities

The ODL providers described in the previous two paragraphs have a common characteristic. They have their premises in some physical location or locations. The institutions described in this paragraph exist entirely on-line, which means that in addition to offering ODL courses on-line, they also enroll students only electronically. Due to this fact they are referred to as “On-line Universities”
These On-line Universities fall in three categories:

- **Independent academic brokering services** in partnership with universities, which provide an on-line interface to distance education courses. The Electronic University Network EUN (http://www.wcc-eun.com) is such an example. EUN offers complete services (online campus design and construction - assistance with online marketing - registration - distribution of learning material - student and faculty support services - maintenance of online campus in general)

- **Outonomous organisations** existing entirely on-line which have established their own academic departments and curriculum. The Jones International University (http://www.jonesinternational.edu) is a representative example of this type. JIU refers to itself as the University of the Web. It is an institution of higher education which offers ODL courses, completely on the Internet, leading to a Bachelor's degree. JIU is specifically targeting groups of adult learners. JIU engages top experts in their fields of study as creators of courses and curricula for this purpose. It also empasises the need for collaboration with other institutions of higher education.

- **On-line Agents** to "thousands" of courses offered by various distance learning institutions. They function as listing services, which means that they do not handle admissions and registrations directly. One should contact the relevant institution for this purpose. ("Loosely coupled Agents") These organisations also act as

consultans to Institutions and in which case their personnel is directly involved in the development and the delivery of some of the courses. The Globwide Network Academy (GNA) (http://www.gnacademy.org) can be studied as a representative example. GNA was founded in 1993 and is incorporated as an educational non-profit organisation in Texas, USA. It acts as an agent to more than 17,000 ODL courses offered by a great number of Universities, colleges and other training organisations.

The number of these on-line institutions is increasing dramatically the last years mostly in USA and Europe. More examples of them can be studied through appendix 1 under the relevant category of On-line providers.

4.4 Networks of Universities

Open Universities, Universities offering ODL courses and On-line universities as presented previously are mostly aiming to create an environment which facilitates self-directed learning activities. From the structural point of view one can say that the institution is always at the centre coordinating and taking care of all the activities of the distance education. A more effective approach to distance education is that of Networks of Universities collaborating for the provision of ODL. This type of ODL model has been studied extensively in the context of MECPOL project (Goodyear, 1997; MECPOL, 1998; Haugen, 1998), where Networked Universities are referred by the term Virtual Learning Institutes:

> *A Virtual Learning Institute is created through a collaboration between two or more universities with the aim of providing networked open learning opportunities to students.*

A VLI depends depends upon formal inter-institutional collaboration and does not cover more informal collaborations between individuals in different institutions, or arrangements where an institution is simply buying-in expertise from individuals in other institutions as was the case of On-line Institutions described in paragraph 4.3. Collaborative Learning approaches are considered essential to a VLI and network technologies are the main means by which students' learning is supported. Much of the academic and administrative communication between collaborating staff in the different institutions also uses network technologies.

The following are alternative models of the VLI concept:

(a) Speciality-based co-operations

These could be either short-term or long-term co-operations. In short term co-operations, a VLI consists of two or more universities which collaborate in a specific domain of speciality. In practice, the work may well be done by staff of just one department or faculty within each institution, but the VLI is under inter-institutional recognition and support. In long-term co-operations high-prestige universities specialising in advanced graduate or post-graduate areas are forming a global networked association. DoODL and Unext are representative examples of short term and long term co-operations respectively:

DoODL (Dissemination of Open and Distance Learning) (http://www.idb.hist.no/doodl) is a consortium of 8 European Institutions from Finland, Greece, The Netherlands, Norway and United Kingdom offering ODL courses to their students. DoODL was granted by the European Commission programme SOCRATES.

Under **Unext** (http://www.unext.com) the London School of Economics (LSE) has established a "commercial" VLI collaboration with a venture capital company and four top American Universities, the Universities of Chicago, Colombia, Stanford and Carnegie Mellon. This VLI offers MBA degrees by Internet-based distance learning to the corporate sector, targeting managers in global organizations such as IBM.

(b) Geographically-based co-operations

This model describes a VLI whose partner organisations are located in the same country or region. An example of such a VLI is the NITOL Networked University.

NITOL (Norway-net with IT for Open Learning) (http://www.idb.hist.no/nitol) Nitol offers university and college courses and studies for people seeking initial, in-service or further education. It is possible to follow the courses at home,at work or at an educational institution. Internet is used as a medium for course presentation , guidance and co-operation between individuals , groups or institutions.

(c) Hierarchical - franchising co-operations

This model describes a VLI formed through a 'franchise' arrangement, in which one or more smaller or less prestigious institutions offer courses or even course degrees which are validated by a larger or more prestigious institution.

A more extensive discussion on the previous models of the VLI can be found in (Goodyear, 1997)

Another type of VLI regarding bigger long-term Networks of collaborating institutions is that supported at regional or national level by governmental authorities. Western Governors University in USA and the UK University for the Industry can be studied as representative examples:

Western Governors University (WGU) (http://www.wgu.edu/wgu/index.html)
WGU is a "virtual university" opening its "doors" in 1998, developed by the governors of Arizona, Colorado, Idaho, Nebraska, New Mexico, North Dakota, Oregon, Utah, Washington, Wyoming, Alaska, Hawaii, Montana, Nevada, Oklahoma, Texas, Indiana, and Guam, WGU serves a gateway to educational courses and programs at universities in the United States and around the world. They recently forged international collaboration agreements with China (China Internet Education Center), Japan (Tokai University), Canada (University of British Columbia), United Kingdom (The Open University), and Mexico (Virtual University of the Monterrey Institute of Technology).

The University for Industry (UfI) (http://www.dfee.gov.uk/ufi/index.htm)
The University for Industry (UfI) is at the heart of the UK Government's vision for lifelong learning, as set out in the Green Paper, The Learning Age: a renaissance for a new Britain How the University for Industry will operate is explained in the Pathfinder Prospectus (DfEE 1998).

4.5 Other types of ODL providers - Open and Distance Learning Associations

Universities and educational institutions are not the only ones developing and offering ODL programs. An increasing number of corporations are currently involved in the development or deployment of distance education and training. Their ODL programs have as target groups:

- Their customers. In this way companies enable their clients to attend extensive product training classes without requiring costly travel and they also provide better service procedures to them.
- Their staff members. The need for maintaining an up to date competitive staff, forces the enterprises to encourage their employees to attend relevant seminars every so often, even providing partial funding. With ODL, it seems possible that the staff will not need to move from their working environment in order to be trained.

The following two companies are examples of (a) and (b) respectively:

- **NetSuite** (http://www.netsuite.com/support/index.shtml)

NetSuite is a company in Massachusetts, USA that provides software for network discovery, design, validation and documantation, offering interactive Web-based training to its customers, through its educational service department. The virtual classroom introduced by NetSuite is based on specialized software enabling their "students" to interact with instructors via the Internet with the benefits of a live classroom environment, including lectures, fully-mentored lab exercises, real-time audio, real time application sharing. These classes have already been offered to customers in US, Europe and Asia.

- **MONY** Life Insurance (http://www.mony.com)

MONY Life is an Insurance Company, belonging to the MONY Group, Inc, New York, which orginises distance learning activities for its staff. MONY implements its virtual classroom by the use of Contigo Software (http://www.contigo.com). More than 2,000 employees are following the companies specialised courses. They are able to attend conferences from the field and to record and playback seminars and other training events from an online library of knowledge sources.

Another interesting category of companies that act as ODL providers is Press/Publishing companies. The McGraw-Hill Publishing Company is such an example. Using state-of-the-art course delivery software, it provides to distant students and trainers the most efficient and effective medium for learning through ODL. **McGraw-Hill On-Line Learning** (http://www.mhonlinelearning.com/index.htm) offers more than 20 self-paced, interactive business and informational courses to home students with personal access to instructors through e-mail and discussion groups

An important role in distance education is also assigned to international Associations, Councils and Centres. Although they are not directly considered ODL providers they help a lot in the development the provision and generally to the dissemination of ODL through their members. ICDE and EADTU are examples ODL associations, but a more extensive list can be found in appendix 1 under the "Other ODL providers" category.

ICDE (The International Council for Open and Distance Education) (http://www.icde.org/) is the global membership organisation of educational institutions, national and regional associations, corporations, educational authorities and agencies in the fields of open learning, distance education, and flexible, lifelong learning.

EADTU, the European Association of Distance Teaching Universities (http://www.eadtu.ouh.nl/) is a strategic level organisation whose European activities

and projects support and advance goals towards achieving its mission: to promote and support the creation of a European network for higher level distance education.

5. Types of ODL courses/modules offered - ODL Models/Pedagogy

Regarding course providers presented earlier, some comments concerning the types of ODL courses and modules offered as well as the models of pedagogy used for the delivering of the courses are in order:

- Domain areas on which ODL courses are offered cover almost all areas of formal education as well as applied areas having to do with special training needs of different groups of users. It is observable that courses having to do with the Information and Communication Technologies (ICTs) predominate. A great number of courses are also offered in the domain of business and marketing, with special emphasis on Internet Marketing and complete modules leading to MBAs(Master of Business Administration). Courses regarding the Design and Pedagogy of ODL as well as on Cultural and Ethical issues are also present in the curriculum agenda of some of the providers.
- Target groups include pre-college vocational education, College/ University students (both in-campus and off-campus). Individual home learners and adult learners at their workplace seem to be a target group which is becoming the 1st choice for ODL providers.
- There is no common standard adapted by course providers concerning the description of course profiles which seems to be an issue that deserves special attention in the near future. Apart from a traditional abstract textual description, a course profile requires explicit information concerned with the target group, such as admission qualifications, maximum number of admissions, level of difficulty, prerequisite knowledge needed from potential learners, etc. In addition to those, a clear view of the delivery of the course should be provided, including period of study, qualifications to be obtained, credits and links to other courses, role of the course as a module in an integrated programme, mode of delivery, assessment scheme, etc. Relevant work, such as the Upsalla grid for specifying courses as reported in (Lawhead et al., 1997), the European Credit Transfer System (ECTS), and other educational standards which are currently under development by various academic societies (IEEE P1484, ANSI etc.). (Rada & Schoening, 1997) can act as a starting point.
- Regarding models of pedagogy used for the delivery of the ODL courses: In a quite big percentage of ODL course the delivery is done based on the simple **Transmission/dissemination** which means that the course is “fired out” on the

Internet/WWW and the learners are left alone with almost no tutoring. In most of the occasions the **Transmission with discussions** model is used, which means that some form of virtual classroom activities take place for the implementation of a systematic communication between tutors and learners. A few interesting examples also exist where tutors and learners form **Collaborative learning communities**. A discussion on these types of ODL models can be found in (Mikalsen, 1998).

6. Technical Support - Financial Aspects

It has to be noted with emphasis that a number of operational issues such as planning, administration and management, as well as financial aspects are crucial for a successful ODL course. Highly qualified and experienced personnel should be employed at the ODL centres (either ODL production centres and ODL teaching centres) in order to carry out all the above tasks..

Although technology plays a key role in the delivery of distance duration, educators must remain focused on instructional outcomes, not the technology of delivery. The key to effective distance education is focusing on the needs of the learners, the requirements of the content, and the constraints faced by the teacher, before selecting a delivery system. Typically, this systematic approach results in a mix of media, each servicing a specific purpose.

A wide range of technological options are available for ODL, such as:

- Print: textbooks, study guides, syllabuses, case studies etc.
- Voice: either two-way audio tools, e.g. audioconferencing, short-wave radio etc., or one-way audio tools, e.g. tapes and radio.
- Video: films, videotapes etc.
- Data: Computer Assisted Instruction (CAI), Computer-Managed Instruction (CMI) combined with the latter, Computer Mediated Education (CME), e.g. E-mail, fax, conferencing, WWW applications etc.

It is not the purpose of this report to discuss in detail all these operational, administration management and financial issues. Interested readers can find more detailed information in (Chellappa et al., 1997; Stamatis, 1999) concerning the electronic infrastructure needed for the support of ODL. They can also address (Cremers, 1997; MiKalsen, et al. 1997) for management and financial issues and (Hindriks & Mikalsen; 1998) for issues regarding the support of ODL students.

7. Summary - Conclusions

Distance education changes the learning relationship from the common, centralised school model to a more decentralized, flexible model. It also reverses social dynamics by bringing school to students, rather than students to school. As we approach the 21 centuary we believe that it will be hard to find any of the well know universities worldwide which will not use some form of ICT-based distance education. The question is what will be the values of this education and what will be the models and collaborations that will be used for the provision of ODL by the educational institutions and other organizations.

This report looked at on going research and development concerning Open and Distance Learning. It also looked at characteristic examples of ODL providers and reported on the issues regarding their organisational structure. Special emphasis was given to those providers forming networks for the provision of ODL.

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Appendix 1 : ODL PROVIDERS

OPEN UNIVERSITIES

UK Open University
Maybe the most famous Distance Educational Establishment in the World, having more than 200,000 students participating in distance learning courses. The International Centre for Distance Learning (ICDL) is an international centre for research, teaching, consultancy, information and publishing activities based in the Institute of Educational Technology of the Open University, which received world class rating in the 1992 and 1996 Higher Education Funding Council for England (HEFCE) Research Assessment Exercises.
URL : http://www-icdl.open.ac.uk/

CNED (CENTRE NATIONAL D' ENSEIGNEMENT A DISTANCE)
URL : http://www.cned.fr/Index4.htm

Norway's NKS Distance Education Organisation
NKS Distance Education, a self-owned non profit making foundation, is one of the largest institutions of flexible learning in Northern Europe. It specialises in adult education and has a lot of experience in combining media and designing custom programs which are suitable for different target groups. NKS is also a specialist in building networks between universities, central and local authorities, companies and others when new educational programs need to be created.
URL : http://www.nks.no/wge

SPAIN UNED
The Universidad Nacional de Educaciσn a Distancia (UNED), is similar to other Spanish public Universities. It awards the same qualifications, which are equally valid and it is run under the same general legislation. However, the special features of UNED make it different from most other Spanish Universities.
URL : http://info.uned.es/inforgen/english/what_is.htm

Open University of the Netherlands
The Open University charter identifies two further aims: to create a more cost-

effective form of higher education, and to encourage innovation in higher education, in terms of both the curriculum and the teaching methods.
URL : http://www.ou.nl/info-alg-english-index/index.htm

Open University of Ghent
In cooperation with the Dutch Open University ,Open University of Ghent offers courses (to keep up to date) and complete university programs in guided selfstudy. Students study in their own time and place and at their own place.
URL : http://openuniv.rug.ac.be/eng/

The Greek Open University
The Greek Open University is initially based in premises of the Institute of Technology and Research in Patras and has started the procedures for implementing a number of courses. It currently offers two courses of study at the Postgraduate level.
URL : www.eap.gr

Canada's Open University
Athabasca University is Canada's leading distance-education university, offering a high-quality university education to more than 16,000 students each year.AU is dedicated to the removal of barriers that traditionally restrict access to and success in university-level studies, and to increasing equality of educational opportunity for all adult Canadians, regardless of their geographical location or prior academic credentials.
URL : http://www.athabascau.ca/

Vancouver's Open Learning Agency
URL: http://www.ola.bc.ca/

The Open University of Hong Kong
The Open University of Hong Kong (formerly OLI) was established by the Hong Kong government in 1989. Two characteristics set it apart from other conventional tertiary institutions: it is " OPEN ", and it is the first University in Hong Kong to provide higher education mainly through distance learning.
URL : http://www.ouhk.edu.hk/~oliwww/intro/whatoli.htm

Israel Open University
The Open University of Israel is a distance education university designed to offer academic studies to students throughout Israel. Its home study method allows students all over the country to pursue a higher education, whenever and wherever convenient, without interfering with their other personal and vocational obligations.
URL : http://www-e.openu.ac.il/introd/campus.html

UNIVERSITIES offering ODL courses

University of Phoenix
One of the biggest institutions in The United States of America concerning open and distance learning, has an enrolement of 50,000 distance students
URL: http://www.uophx.edu/online/

Indiana University
Hundreds of courses are available to students at a distance at Indiana University
URL: http://www.indiana.edu/~iudisted/

R.I.T.
R.I.T. offers five graduate degrees, three undergraduate degrees, twelve certificates and 200 courses online. RIT has been offering distance learning courses since 1979 and is a recognized national leader in this field.RIT distance learning degrees offer the same quality as on campus programs and offer the added flexibility of allowing the student to learn at a time that is convenient for them.
URL : http://www.distancelearning.rit.edu

University of Maryland
One of the biggest institutions in North America concerning open and distance learning..
URL : http://www.tact.fse.ulaval.ca/ang/html/partie3.html

U.B.C. DE&T
University of British Columbia,Canada: The Distance Education and Technology Division of Continuing Studies
URL : http://www.cstudies.ubc.ca/disted/

C SALT (Centre for Studies in Advanced Learning Technology, Lancaster University).
The aim of C SALT is to provide a focus for research in advanced learning technology (ALT), a field in which Lancaster University has a well-established international reputation. A number of ODL courses are provided in selected areas of study.
URL : http://www.lancs.ac.uk/users/edres/research/csalt/csalt.html

CMIL (The Center for Media and Independent Learning)
The Center for Media and Independent Learning (CMIL) is a statewide division of University of California Extension. CMIL offers more than 180 high school, university, and professional development courses online, and by mail, electronic mail, and fax. In addition, They are one of the nation's

foremost distributors of educational media, offering videos and films for sale worldwide and for rental nationwide.
URL: http://www-cmil.unex.berkeley.edu/cmil

New York University School On Line courses
URL : http://www.sce.nyu.edu/virtual/

University of South Africa
The University of South Africa is the largest university in South Africa and one of the largest distance education institutions in the world. Unisa offers internationally recognised certificate, diploma and degree courses up to doctoral level.
URL : http://www.unisa.ac.za

Universite de Geneve, Swiss
"Offre de formation a distance." Swiss University offering ODL courses
URL : http://ecolu-info.unige.ch/formcont/Distance.html

Interior Distance Education of Alaska
IDEA is Galena City School District's correspondence program for homeschooling students in the state of Alaska.
URL : http://www.galenaalaska.org/idea.htm

Some more institutions in the USA that provide ODL
URL:http://ccism.pc.athabascau.ca/html/ccism/deresrce/institut.htm

URL:http://ccism.pc.athabascau.ca/html/ccism/deresrce/institut.htm

On-line Institutions

Electronic University Network EUN
EUN offers complete services (online campus design and construction - assistance with online marketing - registration - distribution of learning material - student and faculty support services - maintenance of online campus in general)
URL : http://www.wcc-eun.com

Virtual Online University
Virtual Online University Services International offers a novel and effective approach to academic excellence, professional development and life-long learning.Conventional distance education programs leave one isolated, and few are based on *interactive* real-time instruction online. VOUSI uses an enhanced Virtual Education Environment (VEE) as their electronic campus.

URL : http://www.vousi.com/index.html

TechOnLine University

TechOnLine University is a provider of free Internet-based training to a wide universe of engineering professionals.

URL : http://www.tolu.com/open/tolu/whatis.html

Jones International University

Jones International University ™ LTD invites you to enter the world of online learning.

URL : http://www.jonesinternational.edu

The Globewide Network Academy(GNA)

GNA was established in 1993. Incorporated in Texas as a non-profit enterprise, claims itself as the world's first virtual organisation

URL: http://uu-gna.mit.ebu:8001

Teleeducation NB

TeleEducation New Brunswick provides assistance in the development and delivery of distance education programmes. Access to distance learning is made possible locally via our network of Community Learning Centres and globally via TeleCampus, our online teaching and learning environment.

URL : http://teleeducation.nb.ca/

Internet University

This "Virtual College" has links to more than 2,000 Internet study resource sites and online courses. It also includes profiles of accredited online course providers.

URL: http://www.caso.com

Lucent Technologies CEDL

Lucent Technologies Center for Excellence in Distance Learning (CEDL) creates information products for customers who are planning distance learning solutions. CEDL collaborates with Indiana University, Penn State University and University of Wisconsin

URL: http://www.lucent.com/cedl/contents.html

Virtual University

Virtual University is a nonprofit, worldwide learning community and the largest educational portal on the Internet today; but their roots extend back many years to the 1960s.

URL : http://www.vu.org/

NETWORKS of ODL organisations

NITOL (Norway-net with IT for Open Learning)
Nitol offers university and college courses and studies for people seeking initial, in-service or further education. It is possible to follow the courses at home,at work or at an educational institution. Internet is used as a medium for course presentation , guidance and co-operation between individuals , groups or institutions.
URL : http://www.idb.hist.no/nitol

DoODL (Dissemination of Open and Distance Learning) is a consortium of 8 European Institutions from Finland, Greece, The Netherlands, Norway and United Kingdom offering ODL courses to their students. DoODL was granted by the European Commission programme SOCRATES.

URL: http://www.wgu.edu/wgu/index.html

Unext
UNext.com is a group of business and academic professionals with a shared vision of the future of distance learning. We are dedicated to building the first-ever online education enterprise focused on high quality education as it is created and taught in respected and distinguished educational institutions.
URL: http://www.unext.com

Western Governors University

A "virtual university" opening its "doors" in 1998, developed by the governors Arizona, Colorado, Idaho, Nebraska, New Mexico, North Dakota, Oregon, Utah, Washington, Wyoming, Alaska, Hawaii, Montana, Nevada, Oklahoma, Texas, Indiana, and Guam, WGU serves a gateway to educational courses and programs at universities in the United States and around the world. They

The University for Industry (UfI)
The University for Industry (UfI) is at the heart of the Government's vision for lifelong learning, as set out in the Green Paper, The Learning Age: a renaissance for a new Britain (Cm 3790,1998). How the University for Industry will operate is explained in the Pathfinder Prospectus (UfI 1).
URL: http://www.dfee.gov.uk/ufi/index.htm

Western Governors University

A "virtual university" opening its "doors" in 1998, developed by the governors Arizona, Colorado, Idaho, Nebraska, New Mexico, North Dakota, Oregon, Utah, Washington, Wyoming, Alaska, Hawaii, Montana, Nevada, Oklahoma, Texas, Indiana, and Guam, WGU serves a gateway to educational courses and programs at universities in the United States and around the world. They

recently forged international collaboration agreements with China (China Internet Education Center), Japan (Tokai University), Canada (University of British Columbia), United Kingdom (The Open University), and Mexico (Virtual University of the Monterrey Institute of Technology

URL: http://www.wgu.edu/wgu/index.html

The University for Industry (UfI)
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URL: http://www.dfee.gov.uk/ufi/index.htm

Other O.D.L. Providers

ExecuTrain Corporation
ExecuTrain Corporation is the world leader in business technology training.The company's comprehensive, customer-focused solutions include instructor-led and multimedia training for popular desktop applications plus course development and training on client-specific software applications.
URL : http://www.executrain.com/infocenter/profile.htm

DigitalThink
DigitalThink is the leader in e-learning solutions. Their web-based learning solutions are a powerful new tool for executives who understand its what their people know that makes companies successful today.
URL : http://www.digitalthink.com

Mc Graw-Hill OnLine Learning
McGraw-Hill OnLine Learning brings more than 20 self-paced, interactive business and informational technology courses to your desktop or home computer — all with personal access to instructors through e-mail and discussion groups.
URL : http://www.mhonlinelearning.com/

INTERNATIONAL COUNCIL FOR OPEN AND DISTANCE EDUCATION
The International Council for Open and Distance Education (ICDE) is the global membership organisation of educational institutions, national and regional associations, corporations, educational authorities and agencies in the fields of open learning, distance education, and flexible, lifelong learning.

URL : http://www.icde.org/

EUROPEAN **D**ISTANCE **E**DUCATION **N**ETWORK (EDEN)

The European Distance Education Network (EDEN) was formally established in May 1991 following the first pan-European conference on distance education in Budapest in 1990. Its aim is to foster developments in distance education through the provision of a platform for co-operation and collaboration between a wide range of institutions, networks and individuals concerned with distance education in Europe. EDEN is registered as non-profit company limited by guarantee under English Law in the United Kingdom.(Registered number: 2715308 England).
URL : http://www.eden.bme.hu/

European Association of Distance Teaching
The European Association of Distance Teaching Universities - EADTU - is a strategic level organisation whose European activities and projects support and advance goals towards achieving its mission: to promote and support the creation of a European network for higher level distance education.
URL : http://www.eadtu.ouh.nl/

United Stated Distance Learning Association (USDLA)
A non-profit association with over 2000 members formed to promote the development and application of distance learning for education and training.
URL : http://www.usdla.org/

DETC: Distance Education and Training Council
The Distance Education and Training Council is a non profit educational association located in Washington, D.C. DETC serves as a clearinghouse of information about the distance study/correspondence field and sponsors a nationally recognized accrediting agency called the Accrediting Commission of the Distance Education and Training Council.
URL : http://www.detc.org/

AFPA (National Association for Adult Vocational Training)
AFPA (National Association for Adult Vocational Training) is a leading adult vocational training organization both in France and in Europe. It is managed by a tripartite Board, under the auspices of the Ministry of Employment and Solidarity.
URL : http://www.afpa.fr/AFPAgb.html

The material of this appendix can be found on :
http://demosthenes.it.teithe.gr/eurocompetence/providers.html

Appendix 2 : ODL PROJECTS

E.U. Projects

Socrates ODL Projects

Descriptions of European cooperation projects supported by Socrates/ODL
URL: http://www.siu.no/isoc

JITOL

JITOL (upper case) refers to a group of projects within an EU funded programme (1992 - 1994) which explored and evaluated the use of telematics in learning through case studies in UK, Norway, France.
URL : http://www.shef.ac.uk/uni/projects/jitol/itol2.html

DOODL

Do ODL is a project granted within the European Commision programme SOCRATES, and there are eight partners in 5 different European countries: Finland, Greece, The Netherlands, Norway and United Kingdom.
URL : http://www.idb.hist.no/DoODL/

MECPOL

MECPOL is part of the European Commission programme SOCRATES. MECPOL is a European partnership project, aiming at mutual collaboration and exchange between all participating organisations as well as for relevant ODL user groups that will benefit from the educational programmes offered.
URL : http://balder.stud.idb.hist.no/mecpol/

SHARP (Shareable representations of practice: pedagogy for asynchronous multimedia conferencing)

The main purpose of the project is to identify and disseminate pedagogical and organisational guidelines for the use of asynchronous multimedia conferencing (AMC) in situations where learners are trying to acquire complex skills. The primary focus is on learners in higher education who need to acquire complex skills for application in real-world working contexts.
URL : http://www.lancs.ac.uk/users/edres/research/sharp/index.htm

R.T.D. Projects for Universities
URL:http://www2.echo.lu/telematics/education/en/projects/projects/universities.html
Error! Bookmark not defined.

B.I.C. (Blueprint for Interactive Classrooms)
The BIC project is developing a comprehensive and user friendly resource which provides guidance and support on the essential issues for developing telepresence classrooms.
URL:http://www2.echo.lu/telematics/education/en/projects/files/bic.html

D.E.M.O.S. (Distance Education and Tutoring in Heterogeneous Telematics Environments)
D.E.M.O.S. is creating a new form of educational environment which combines several telematics-based technologies into one integrated system for students in Europe.
URL : http://www2.echo.lu/telematics/education/en/projects/files/demos.html

DOMITEL (Education and Training Services for Home-Learners)
DOMITEL Aims to Develop and Demonstrate a Supporting Telematic Learning Environment for Home Learners Using Cable TV Networks.
URL
:http://www2.echo.lu/telematics/education/en/projects/files/domitel.html

I.D.E.A.L. (Integration of dedicated for Advanced Training Linked to Small and Medium-Sized Enterprises and Institutes of Higher Education) .The IDEALS project is anticipating tomorrow's learning scenarios by providing telematics-based distance learning services to SMEs and Institutes of Higher Education via the World Wide Web. It enhances the results of the DEDICATED project - funded under the Third Framework Programme which developed, established and evaluated Local Training Centres for education, and connected them via terrestrial links to form a Europe-wide network to support computer based training.
URL : http://www2.echo.lu/telematics/education/en/projects/files/ideals.html

META (Multimedia Educational Telematics Applications)
META, Multimedia Educational Telematic Applications, deploys the latest advanced communication technologies to deliver educational support and a digital production platform for training creative imaging students and professionals for the emerging multimedia sector.
URL:http://www2.echo.lu/telematics/education/en/projects/files/meta.html

SAVIE (Support Action to Facilitate the Use of Videoconference in Education)
SAVIE provides practical training in the use of videoconferencing for all

those involved in the provision of education and training in Europe
URL : http://www2.echo.lu/telematics/education/en/projects/files/savie.html

TEN (Tertiary-Level Education and Vocational Training)
TEN is a major project to extend an already successful network of satellite-based virtual training and education to the trans-European level.
URL :http://www2.echo.lu/telematics/education/en/projects/files/ten.html

Other Projects

The Alfred P. Sloan Foundation Asynchronous Learning Network

This programme called Learning Outside the Classroom is currently funding a number of projects at colleges and universities in U.S.A. to explore ODL and related outcomes.
URL: http://www.sloan.org/Education/ALN.new.html

The material of this appendix can be found on:
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http://www.lancs.ac.uk/users/ktru/jcal-abs.htm

Education and Information Technologies Official Journal of IFIP
http://137.122.151.13/Library/Periodicals/rrm_period_Educ_and_Info_Techno.htm

American Journal of Distance Education
http://www.cde.psu.edu/ACSDE/Jour.html

Active Learning
http://www.cti.ac.uk/publ/actlea/

International Journal of Artificial Intelligence in Education
http://cbl.leeds.ac.uk/ijaied/

Association for Learning Technology Journal
http://www.swan.ac.uk/uwp/alt.htm

OTHER ODL ON-LINE RESOURCES

Web Site Evaluation - A Collection of Research Papers and Surveys
A collection of papers regarding the evaluation of websites and online education courses, maintained at the Syracuse University
URL: http://web.syr.edu/~maeltigi/Research/RIGHT.HTM

Distance Educators' Desk Guide Online
The purpose of the Distance Educators' Desk Guide Online is to assist teachers, instructors and trainers make a successful transition to delivering ODL
URL: http://www.bizresources.com/learning/de_deskguide.html

Welcome to Search Engines for Education
URL: http://www.ils.nwu.edu/~e_for_e/index.html

Distance Education in Higher Education Institutions. (1997)
National Center for Education Statistics, U.S. Department of Education

URL: http://nces.ed.gov/pubs98/distance/index.html

University of Idaho. Distance education at a glance. Short guides on distance learning.
URL : http://www.uidaho.edu/evo/distglan.html

The Comprehensive Distance Education List of Resources
URL : http://www.dacc.cc.il.us/

Distance Education Clearing House
URL : http://www.uwex.edu/disted/home.html

The material of this appendix can be found on :
http://demosthenes.it.teithe.gr/eurocompetence/references.html

APPENDIX 4: Questionnaire for ODL Providers

Project no 56544-CP-1-98-1-NO-ODL-ODL

MODELS FOR SUPPLIER NETWORKS

QUESTIONNAIRE

Introduction

EuroCompetence is a transnational co-operation project aiming to develop and try out a flexible model for delivering Open and Distance Learning (ODL) studies to adult learners. (Please see http://www.tisip.no/ec if you need further information)

The purpose of this questionnaire is to explore the types of organisations/institutions which offer ODL studies by using Information and Communications Technology and more specifically Internet/WWW.

Part 1 General Information

1a Please provide some general information about your Institution/Organisation

Name of Organisation:	
Address:	
Telephone:	
Fax:	
E-mail:	
URL:	
Contact person :	

1b What is the type of the Institution/Organisation?

Open University ☐
University offering ODL trough a specialised department/center ☐
Private College/University ☐
Governmental Organisation ☐
Professional Body ☐
Corporate Organisation ☐

Other Please Specify ☐

Part 2 Domain Areas and Target Groups for ODL

2a Do you offer ODL courses on the following domain areas?

Information and Communication Technologies ☐

International Marketing ☐

Public Relations, Language and Culture Issues ☐

Please specify two more domain areas in which you offer ODL courses

2b Does your Institution/Organisation belongs to a broader Network of Institutions in providing the ODL courses? YES NO

If YES could you please list the other partners of the Network?

2c Which are the target groups addressed by the ODL courses offered?

University Students (in Campus) ☐

University Students (at a Distance) ☐

Adult Learners (Individuals) ☐

Adult Learners (at their Workplace) ☐

Other Please Specify

Part 3 Use of Internet/WWW for Course Development, Delivery and Communication

Please give some information on how Internet/www is utilised in your courses

3a What type of multimedia elements are used for the development of ODL material?

Text ☐

Graphics ☐

Animation ☐

Digital Video ☐

Sound ☐

Java Applets ☐

Other Please Specify ☐

3b What methods are used for ODL course delivery and communication?

e-mail ☐

web-pages ☐

computer conferencing ☐

Other Please Specify ☐

3c Do you use specific specific software for course delivery?

Specially Developed Software ☐

TopClass ☐

Lotus Notes ☐

WebCT ☐

Other Please Specify ☐

Part 4 Additional Information

4a Please give the URL address of a representative ODL course offered by your organisation

4b Would you have any objection to your institution being included in the Eurocompetence Directory of O.D.L. providers?

Yes ☐

No ☐

4c Please add any other information you consider pertinent

Thank you for completing this questionnaire

The Eurocompetence team

The material of this appendix can be found on :
http://demosthenes.it.teithe.gr/questionnaire