



EDUCATION AND CULTURE

# LEONARDO DA VINCI

Second phase:2000-2006

## Project: «Title»

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## Survey for case studies in the Megatrends project

### Universidade Aberta

#### Facts about the institution

Name of institution	Universidade Aberta (Open University of Portugal)
URL of institution	<a href="http://www.univ-ab.pt">www.univ-ab.pt</a>
Country	Portugal
Levels in the education system	Higher education level
Interviewer	Pedro Fernández Michels
Interviewees	António Moreira Teixeira Pró-Reitor <a href="mailto:amt@univ-ab.pt">amt@univ-ab.pt</a> Lucia Amante Department of Educational Sciences <a href="mailto:lamante@univ-ab.pt">lamante@univ-ab.pt</a>

Universidade Aberta was founded in 1988 and started its activities in the year 1989/1990 as a distance education university using traditional technology like video, audio and print material. The increasing number of students led to the first virtualization of the course offer in 2001. In 2006 Universidade Aberta provided more than 60 fully virtual courses to a total number of about 1400 students. Although up to the present year online courses have not been very representative for the institution's general educational offer, the academic year 2007/2008 is going to mark a change in the main characteristics of Universidade Aberta: All postgraduate courses and all new courses belonging to the graduate segment that match the requirements for the European Higher Education Area will be offered online.

#### Contextual factors

##### Market size

Portugal has a surface of almost 92.000 square kilometres and a resident population of about 10 million. The country comprises a part of continental Europe and the archipelagos of the Açores and Madeira. Portugal's population is irregularly distributed. A very large number of people lives in the metropolitan areas of Lisboa and Porto and in the coastal strip between both cities. The end points being the towns of Setúbal (in the south) and Braga (in the north). The southern coast - the Algarve - is also rather densely populated, whereas the population density in the interior of the country is relatively low. The interior has sometimes considerable communication



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difficulties, and there is even a worrying process of (relative) depopulation in the rural areas.

### **Market readiness to use online technologies**

"E-Learning is not yet consolidated enough in Portugal to offer a viable alternative to traditional educational structures. In fact, no national policy specifically addressing eLearning exists. Within the most relevant instrument, the Portuguese Action Plan for the Information Society (POSI), no reference of an eLearning policy can be found other than action 2.3.1 "Develop e-learning courses" of measure 2.3 "Lifelong Learning" of item 2 "New Competences", which can hardly qualify as a structured policy. With respect to existing providers of eLearning, a look at the public sector is disappointing [...].The two main distance learning providers in Portugal, the Open University - "Universidade Aberta", and the Mediatized Basic Teaching, "Ensino Básico Mediatizado", offer both a combination of traditional teaching methods with eLearning multimedia packages or video technology to provide basic and higher education services. In addition, some private sector training companies offer offline eLearning scenarios based on CD-ROM-deliveries. Main providers on the Portuguese market are CEAC, CCC and CampusEsine. Again, however, only one full eLearning course is provided by the Naval Centre for Distance Learning (Centro Naval de Ensino à Distância), which offers distance learning for Recurrent Secondary Education for a specific type of qualification: the Military Sergeants' Course."<sup>1</sup>

### **Target group acceptance of e-learning**

The acceptance of e-learning within university students can be considered relatively high. The following table<sup>2</sup> shows the indicators for the use of Internet within the portuguese population:

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<sup>1</sup> [http://www.euser-eu.org/eUSER\\_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117](http://www.euser-eu.org/eUSER_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117)

<sup>2</sup> Information found in: [http://www.euser-eu.org/eUSER\\_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117](http://www.euser-eu.org/eUSER_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117)  
*Households with Internet access* = Percentage of households that have Internet access at home 2004; Population base: 16-74; Source: Eurostat 2005. *Broadband penetration*: Number of broadband in 7/2004 connections related to population; user group not specified; Source: Eurostat 2005. *Price for Internet use basket*: for 40 hours using discounted PSTN rates; Source: OECD 2004. *ICT expenditure*: Annual expenditure for ICT hardware, equipment, software and other services in 2004, as percentage of GDP; Source: EITO. *Digital Divide Index*: The DIDIX is a compound index comprised of four indices, and measures diffusion of computer and Internet access and use amongst the four identified 'at risk' groups along the dimensions gender, age, education and income in relation to the population average. The lower the Index value the more severe is the divide, with parity resulting in a value of 100. Based on SIBIS data from 2002/2003 ( [www.sibis-eu.org](http://www.sibis-eu.org) ). EU25 average does not include Malta and Cyprus. See Hüsing, T. & Selhofer, H. (2004): DIDIX: A Digital Divide Index for Measuring Inequality in IT Diffusion, In: IT&SOCIETY, 1(7): 21-38.



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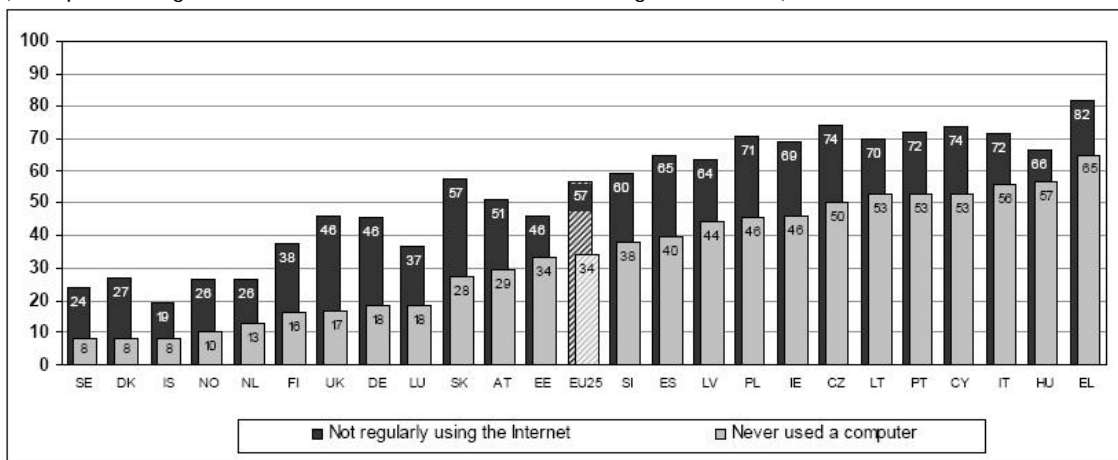
Information Society indicators [http://www.euser-eu.org/eUSER\\_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117-edn3#\\_edn3](http://www.euser-eu.org/eUSER_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117-edn3#_edn3)

	Portugal	Ø EU15	Ø EU25
Households with Internet access	26%	45%	42%
Broadband penetration	6.4%	7.6%	6.5%
Price for Internet use basket	73.25	49.57	48.35
ICT expenditure as percentage of GDP	4.6%	3.2%	2.6%
Digital Divide Index	27.3	53.0	50.1

This information can be contrasted with the the below graph showing digital literacy in the population of the 25 EU-members.

**Digital literacy in population**

Individuals not using computers on the Internet (2005)<sup>3</sup>  
 (as a percentage of the total number of individuals aged 16 to 74)



Source: Eurostat, Community survey on ICT usage in households and by individuals.  
 Notes: Data on computer use not available for Belgium (percentage not regularly using the Internet: 47%); no data available for France and Malta.

The table below shows data regarding the use of ICT in Portugal for 2006.

<sup>3</sup> DEMUNTER, Christophe (2006): "How skilled are Europeans in using computers and the Internet?" [Online article]. In: *Statistics on focus. Industry, trade and services 17/2006*. (Data retrieved on 21/05/2007). URL: [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-NP-06-017/EN/KS-NP-06-017-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-06-017/EN/KS-NP-06-017-EN.PDF)



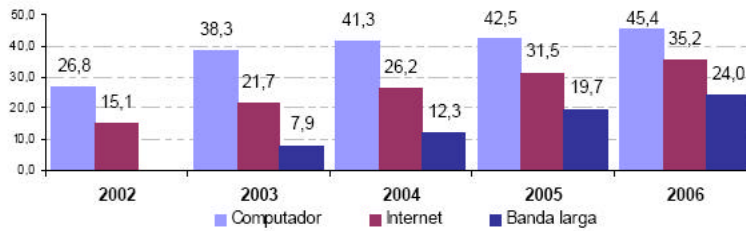
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Gráfico 1 – Posse de computador, ligação à Internet e ligação através de banda larga nos agregados domésticos, 2002-2006 (%)



The light blue bars indicate the percentage of households with computers. The red bars show the percentage of households connected to the Internet and the dark blue bar shows the percentage of households with broadband connection.<sup>4</sup>

### National policy

Portugal does not provide a specific outline regarding policies for e-learning. The government is mainly focussed on facilitating the access to ICT, providing basic skills to the population and araise awareness for the pedagogical possibilities of ICT in teachers and trainers.

"Despite the non-existence of a national strategy for eLearning, there is a public entity that carries out relevant work on the development and establishment of rules and standards for eLearning services (including certification of enterprises in the field of training and e-training). The IQF (Institute for Quality in Training) is a public institute whose main function is to offer strategic support to institutions and trainers developing projects and partnerships in order to improve the existing training system regarding its structure and qualification."<sup>5</sup>

### Historical context

#### 1. How would you describe the history of distance education in your institution?

Universidade Aberta started its activity in the year 89/90 as a traditional distance education university providing mainly print materials, video and audio resources. In the year 2001, the institution started to offer the first online courses. Universidad plans to offer all its courses online in a three-year period compulsory way.

<sup>4</sup> Inquérito à Utilização de Tecnologias da Informação e da Comunicação pelas Famílias – 2006: <http://www.ine.pt/temas.asp?ver=eng&temas=> (Instituto Nacional de Estatística Portugal) [site visited on May 24th 2007].

<sup>5</sup> [http://www.euser-eu.org/eUSER\\_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117](http://www.euser-eu.org/eUSER_eLearningCountryBrief.asp?CaseID=2251&CaseTitleID=1092&MenuID=117) [last visit: May 24<sup>th</sup> 2007]



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The increasing number of students led to an unsatisfactory situation regarding the adequacy of the teaching and learning methods used so far and forced to look for a solution in the field of virtual distance education.

### **2. How has competence in e-learning developed in your institution and how has it contributed to your success?**

Competence in e-learning has developed gradually throughout the last five years. By the means of collaborative interchange between teachers of the

education department from 2006 onwards, all teachers have enrolled on a voluntary basis, in a online trainer's programmes.

### **3. Has this development been abrupt or would you describe it more as a gradual step-by-step process)?**

The development has been a step-by step process starting with short courses for online trainers in 2001/02 and in 2002/03. In 2003/04 one program belonging to the postgraduate segment (Educational Multimedia Communication) was transformed from a traditional format into an online program. Later, apart form this first program there are 3 more online degrees available: The postgraduate course in Pedagogical Supervision, and the postgraduate course in Information Management in School. In the year 2005/06 the course E-Learning Pedagogy was added.

Now, the dissemination of this experience throughout the university followed a more abrupt approach since all courses become online based, according to the new strategic plan approved in 2006.

### **4. How has online education been followed up by evaluation and research and how has this contributed to your success?**

The active element in Universidade Aberta regarding online education was the Department for Educational Sciences. This department was the only which offered online studies, and as such it has been very active in researching and defining a sound pedagogical model for online teaching and learning. Research and experience have led to the final development of a proposal for a Pedagogical Model for online learning that has been approved by the institution's management and will be applicable the coming academic year.

## **Technical issues**

### **5. How would you describe competence in information and communication technology in your institution?**



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Competence is not homogeneous. One can not say that the idea of online education has been adopted without resistance in all the institution, but most teachers are very motivated and have developed a high level of expertise and excellence.

### **6. To which extent are e-learning courses in your institution based on widely used technologies that can be taken into use by students without requiring them to buy additional hardware or software? (in addition to what they have from before)**

The technical requirements on the client side do not include any special items. The university uses the free open source platform MOODLE as the main VLE.

### **7. How would you describe the integration between different IT-systems that are involved in e-learning in your institution? How has this contributed to your success?**

Although there are two coexisting virtual learning platforms in use, MOODLE and ODISSEIA, very few teachers use the latter and politically, the institution is moving towards MOODLE as the only platform to be used for online teaching and learning.

### **8. What are the strengths and weaknesses of your e-learning administrative systems (from enrolment through delivery to certification)?**

#### Strengths:

The application process is less bureaucratic, because it is directly managed by the secretary of the pedagogical department and does not need to go through the administrative system.

#### Weaknesses:

There are difficulties in articulating the processes controlled by the pedagogical secretariat on one hand (application) and the administrative services on the other hand (enrolment).

In addition to these difficulties there is the fact that enrolment fees can not be paid online, which is a contradiction to the philosophy of a wholly functional online campus.



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The administrative centre of the university is undergoing a transformation process in order to compensate these contradictions and difficulties.

## **Courses**

### **9. Which types of subjects are covered by online education in your institution and what is the relative importance of different subjects?**

5 postgraduate programmes covering

- Pedagogy of E-learning
- Information Management in School Libraries
- Pedagogical Supervision
- Educational Multimedia Communication
- Teacher Training

Each of them has a duration of 4 trimesters, which means that they are not yet adapted to the Bologna requisites. The programmes will be functioning according to the Bologna requisites from 2007/08.

In the year 2007/08 the following courses or programmes are going to be included in the online offer:

- Educational Technicians
- Online trainers and online tutors
- Environmental Citizenship
- Environmental Sciences
- Nature
- Consuming and Nutrition
- Applied Languages
- Studies of archaeological and architectural patrimony
- Electronic Commerce and Internet
- Religion and Culture
- Graphic Expression
- Francophone culture, literature and society
- Lusophone culture, literature and society
- American culture, literature and society
- Portuguese culture, literature and society
- English culture, literature and society
- Euroasiatic culture, literature and society

### **10. How would you describe the “onlineability” of the subjects your institution has chosen for e-learning?**

Coming from a distance learning context, Universidade Aberta does not see any difficulties in adapting its existing courses to the virtual medium.



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In the past it used to be difficult to teach languages online, but nowadays technical developments and pedagogical models allow offering successful language courses in virtual environments.

### **11. Do the online courses provided by your institution have flexible start-up and progression?**

Universidade Aberta does not offer the possibilities of flexible start-up and/or progression. The timetables are organized based on trimesters and will be organized in semesters in order to match the Bologna requisites. Students are given 15 days to get used to the VLE. This acclimatising period is done in MOODLE.

### **12. What is the role or importance of synchronous and asynchronous communication between students and teachers and among students themselves?**

Although some particular situations can make synchronous communication useful, the pedagogical model underlying online teaching and learning in Universidade Aberta sees asynchronous communication as a fundamental tool in e-learning courses.

## **Management, strategy and attitudes**

### **13. How would you describe involvement from the institution leadership in terms of being supportive, and how has this been important for success?**

The Department of Educational Sciences worked very much without any major support for the first years in which the implementation of e-learning scenarios was started. Since last year the institution's leadership shows major involvement and commitment with e-learning issues.

### **14. How would you describe the attitudes of the different groups of staff towards online teaching? How has this affected your success?**

The initial group of staff committed with e-learning showed a very high degree of motivation and generated a very positive work dynamic. However, understandably so, the lack of knowledge, the fear of not being able to cope with the workload or with the technical challenges create a certain resistance in some staff members.

### **15. Does your institution have a strategy for online education? If yes, what is (briefly) the content of the strategy and how is it followed up by employees in your organisation?**



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The institution is developing a strategic plan for the implementation of e-learning that consist basically in the following main actions:

- Definition of the educational model for online teaching and learning
- Advanced teacher training program
- Distance Education Laboratory (beginning to be developed)
- Creation of a multimedia resource repository
- Plan of collaboration with local governments and decision makers regarding the improvement of Internet access to students (Wifi distribution and others).

### **16. How does your institution deal with quality issues related to online education and has quality contributed to success?**

Courses are evaluated regarding quality through student questionnaires and through a coordinated evaluation protocol undertaken by the course directors. An general evaluation system on university level is being developed.

### **17. How would you describe the effectiveness of your administrative routines in online education?**

There are some coordination problems between administration and the pedagogical management. However, in the over all both planning and coordination are very effective.

### **18. To which extent do teachers involved in online education have predictable and manageable workloads?**

No systematic prevision of workloads has been undertaken within the institution, but out of experience one can say that an online course generates more work than a traditional distance course. There is no compensation system to balance the differences in workloads because at the moment, there are not many online courses functioning. At the same time one has to say that the traditional distance courses generate a very low level of workload, so that the combination of traditional courses and online courses could lead to a sustainable balance.

The courses are conducted by external tutors. One tutor can teach up to 50 students in one group, so that a number of 200 students can be taught by 3 tutors plus the responsible coordinator of the subject.

### **19. To which extent does your institution collaborate with other educational institutions and how has this affected success?**



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At the moment there is no consolidated dynamic collaboration with other institutions. Universidade Aberta cooperates with other educational institutions in determined face to face contexts. However, the university is planning several joint degrees with other institutions both from Portugal and other countries.

### **20. How would you describe the credibility of your institution (both formal and informal) with the government and public administration and how has this been an important criterion for success?**

Universidade Aberta is a public institution. Therefore, its credibility with the government has always been total. Nevertheless it can be said that the virtual branch of the educational program was sometimes not very well accepted. This initial resistance has recently disappeared, partly due to the fact that more and more face to face universities have been increasing their e-learning provision, so that e-learning in general acquired a more positive reputation.

### **21. How are you able to handle the large number of online courses and students?**

Universidade Aberta does not yet have large numbers of online students. For the near future, the institution relies on a system characterized by a centralized responsibility, a high level of industrialization in the processes of program design, material production and course delivery, a rigorous course planning, an effective administrative system, and the stability of MOODLE.

## **Economy**

### **22. How would you describe the cost-effectiveness of online education in your institution? How has cost-effectiveness affected success?**

Universidade Aberta is a public university, but students still have to pay fees. The costs for the 2<sup>nd</sup> degree are higher than the ones for the 1<sup>st</sup> degree. The institution's intention is to keep a balance between costs and income. At the end, the university's activities always create certain economic benefits. In any case, the cost of developing online courses is very much lower than the cost for developing traditional distance education courses using video and audio material - this is especially important with an increasing number of courses and a decreasing number of students per course.



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### **23. To which extent is income from operation of online education stable and predictable?**

Income is fairly predictable in 2<sup>nd</sup> degree and postgraduate contexts, because the demand is always higher than the university's possibilities of course provision.

### **24. To which extent does your institution experience pressure to be flexible to be able to adapt to a changing market?**

Universidade Aberta reacts to this pressure with a very centralized organization that makes it much easier to adapt quickly market changes. In this context the fact that the university is still a relatively small institution is certainly an advantage.

### **25. To which extent does your institution apply a strategy of flexible employment and use staff to adapt to changes in markets?**

External tutors that are employed depending on student numbers have flexible work contracts and are paid according to their estimated working hours.