

Virtual Models of European Universities

European
Universities

A recent Study analyse the current and potential use of ICT in European Universities. Their findings draw a complete picture on the achievements and limitations of our Higher Education Institutions.

This article summarises the main findings of the study [Virtual Models of European Universities](#).

The study Virtual Models of European universities has been carried by the Danish consultancy Ramboll Management for the European Commission, DG Education and Culture during 2002-2003. The aim of the study was to analyse the current and potential future use of ICT by European universities for educational and organisational purposes. The following lines are a free adaptation of the conclusions of this survey.

Four clusters of Universities

The replies given by the more than 200 European universities which responded to the survey produced a division into four university clusters concerning their current use of ICT in the organisational and educational setting:

1. the front-runners universities (18%), distinguished by their pre-eminence in all respects, including their level of co-operation with other universities and other suppliers of education.
2. the co-operating universities (33%), characterised by the extensiveness of their involvement in strategic co-operation with both domestic and foreign universities and with other education suppliers. They are, like the front-runners, quite advanced in the integration of ICT into their campus-based teaching, but show a more limited use of e-learning courses and digital services.
3. the self-sufficient universities comprise the largest cluster, encompassing 36% of the universities. Their level of ICT integration in the organisational and educational setting is similar to that of the co-operating universities, but they engage in strategic co-operation with other universities or suppliers of education only to a minimal degree.
4. the sceptical universities (15%) are observed to be lagging behind the rest in almost every respect. They are characterised by a limited use of digital services, limited ICT integration in their on-campus teaching, and a very low proportion of e-learning courses.

Spain and the UK have the largest proportion of cluster one universities (22% and 19%). Cluster two universities are represented in all countries, but Sweden and Germany have the largest proportion (18% each). 36% of the cluster 3 universities occur in the UK. Finally, the cluster four universities mainly occur in Italy and Germany.

The basic foundation for ICT use is in place

The study showed that almost everyone in all the universities have access to both computers, the Internet and e-mail accounts. In other words, the basic foundation for the use of ICT is essentially in place. 9 out of 10 European universities have intranets providing information, although only 5 out of 10 provide interactive digital

services.

For the future, the main focus in the organisational setting over the next two years will be to upgrade their technological infrastructure. Almost all universities expect to have an intranet within the next 1-2 years, including plans by the vast majority of universities to offer digital services such as on-line registration for courses and examinations.

A ICT strategy should be developed at the management level

The existence of an ICT strategy is a significantly important driver in the ICT developmental process. In this sense, the absence of conspicuous support and priority allocated by the university management to ICT integration and e-learning is a critical obstacle in many EU universities. The study indicated that this is partly due to the fact that university management have historically not been concerned with ICT and e-learning because they have not been regarded as a core business area. In the years to come, ICT integration and e-learning will tend to evolve from project-based and experimental ventures into integrated features of the normal functioning of all university activities.

The study illustrated that experimental and pilot projects are a key driver in the developmental process. But it concluded that most universities still face a severe challenge in terms of incorporating and anchoring the results and experiences gained from development projects into their overall strategy and activities. Again, the need for management involvement and focus was emphasised.

Limited financial resources were found to be an important barrier to progress in the direction of an extended use of ICT and e-learning. However, the study also showed that the lack of such funding is often the result of university managements' failure to make ICT integration a priority.

Lack of an overall support structure for e-learning

The study clearly showed that an effective ICT unit and support structure is a driver for the integration of ICT and e-learning, as well as a precondition for the successful use of ICT. However, the current organisational structures of the universities generally appear to impede ICT integration and e-learning in many EU universities. This is due to the highly fragmented approaches that characterise many of those universities that lack an overall support structure for ICT-supported teaching. Central units offering professional support and guidance concerning ICT are of key importance. In the future, ICT will not be limited to individual projects and fragments of an organisation but will be incorporated into all its activities, and therefore the ICT unit will be of significant strategic importance.

On the other hand, many students still require basic ICT support and courses. Most universities have taken this task upon themselves. In 77% of the universities participating in the survey, technical support for integrating ICT into their teaching is available to all or a majority of teachers. Nevertheless, there still seems to be a long way to go before these courses and support mechanisms become an integrated and essential aspect of normal university life.

Incentives should be developed

The personal experience and enthusiasm of the trailblazers was found to be a key driver. However, the

organisational structure and the management need to support the work of these trailblazers. The study concluded that the rewards for facing the challenge of integrating ICT into teaching do not match up to the commitment and interest required to implement it. Incentives such as extra time or extra pay are only seldom used as a management tool for enhancing ICT integration. In the years to come, incentives for the individual faculties, institutes and teachers to push the development of ICT further must be developed. The motivation to do so might be based on an awareness of the benefits obtainable from the integration of ICT, and on the availability of extra time for teachers to develop course material.

The use of ICT to redesign education is at the very beginning

The study clearly showed that the general level of integration of ICT in teaching has increased greatly over the past two years among the EU's universities. However, most universities are still at the stage where the use of ICT consists of treating the computer as a sophisticated typewriter and as a means of facilitating communication via traditional pedagogy and didactics in the actual teaching situation, e.g. through the use of presentation programs, data-bases or simulation modules. Only a minority of universities have yet reached the stage of using ICT as a tool to redesign educational programmes, content and curricula on the basis of novel didactic frameworks.

The e-learning offer will increase largely in the next years

The majority of universities offer some e-learning courses. However, in the majority of subject areas, e-learning does not seem to be a preferred delivery mode in either basic academic training or supplementary education. The study indicated that a large increase in the number of courses offered in e-learning format could be anticipated, since 65% of universities state that this will be one of their key priorities over the next two years.

The study also indicated that in the universities' view, e-learning is most suitable for graduate and post-graduate students and needs to be carefully tailored to the particular target group.

Lack of Quality Assurance Systems

The issue of the quality assurance of e-learning courses is considered to be a great challenge, and only a fraction of the universities have yet developed comprehensive quality assurance systems that are designed for e-learning courses.

4 key obstacles

The study showed that the universities face four key obstacles and challenges in their developmental progression towards the extended use of ICT and e-learning:

- 1.** From individual initiative to university culture. For most universities a primary challenge is to translate ICT away from individual initiatives into becoming a component of mainstream education, and this is impeded by a combination of the absence of a coherent and comprehensive management approach to ICT integration with a degree of resistance to change in the university culture.
- 2.** Lack of knowledge. Most academic staff lack knowledge concerning the potential of ICT and new ways to use it.

3. Shortage of ICT resources. The study uncovered a shortage of high-quality ICT-based teaching material. This is a natural consequence of the generally still-immature stage of development. But since both management and academic staff require inspiration in order to begin developing their own material, this is an important obstacle to start doing so. Additionally, developing ICT-supported material and e-learning content is very costly. Hence there is a need for greater incentives to under-take such development, for national or regional initiatives to support it, and for co-operation aimed at spreading the development costs.

4. Regulations should be defined. US trends will probably reach Europe, with the mass production of teaching materials and the gradual industrialisation of the process. In this connection, the regulations concerning intellectual property rights and payment systems aimed at increasing the sharing and re-use of learning resources will have to be refined. This will challenge the traditional values concerning academic freedom and teaching based on the individual research of tutors.

Some recommendations

The Study address a lot of useful recommendations at European, National and University Level. Among them, the report highlights that the development of Quality assurance systems, High Quality ICT based learning materials and metadata standards are crucial for the future of e-learning. The Intellectual property rights and payment systems must be also regulated in order to increase the sharing and re-use of learning resources.

The development of clear ICT strategies, the involvement of managers, the creation of efficient cooperation schemes or the development of business models are also some of the most important recommendations pointed out by the Study.