

eLearning and higher education

Author

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Summary

Modern European university traditions during the last 500 years are facing major challenges in the 21st century. During the Enlightenment and the spirit of Kant, the emphasis was on the logic of human rationality. The Humboldt tradition during the 19th century promoted culture and civilization, a holistic idea of human beings as the ultimate goal of higher education. This vision was replaced in the late 20th century by the idea of centres of excellence which are highly specialized but rather narrow in their approach to knowledge. The idea of civilization degenerated into a techno-bureaucracy. This trend has been further intensified by the market model of a university where such fields of human inquiry are favoured which make money. Also corporate universities are being promoted especially when the new models of e-learning and mobile learning can be applied.

There is now a need for common European virtual education and common European degree system. The content of a European virtual university gateway service would be a portal to net-based or net-supported courses and programmes, information search, collaboration and exchange, common denominators, ownership and endorsement label. The quality issues include transparency, benchmarking, meta-data structure, user and peer reviews, sharing of models and best practise, sharing system and tool description, and user experiences.

Virtual education in Europe has mainly taking place within national level so far and there is not much transnational collaboration yet. National consortia with centre of expertise has been formed in many countries (France, the Netherlands, Finland, etc) while some single e-universities and project-based national initiatives also exist. Public-private partnerships are also developing and there are new providers of content from corporate and media linked sources. The issues of quality assurance and accreditation as well as international strategic alliances are widely discussed.

In Finland, the following progress has been made in recent years in introducing e-learning to higher education:

- Changes in management: Earlier the leadership of the university gave orders to departments and faculties to make progress in applying e-learning in their work. The solution then was further training of the faculty members. Now there are strategic services to the universities to have the departmental level involved. This middle-out approach involves the operative directors of departments and faculties.
- The trend is to promote cooperation between the best research and teaching universities so that materials of high quality will be available to all. A European learning portal between universities is being constructed.
- Common support structures and credit system is being developed between selected European universities which would guarantee mobility and operative infrastructures. Students of any of the participating universities could participate in research-based education. Also search engines for the courses are being developed.

Keywords: lifelong education, European virtual education, universities, digital contents

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Globalisation is consolidated by the extraordinary invasion of higher education by new technologies, especially the Internet. The development of communication and information technologies makes it possible for distance teaching institutions to strengthen their position in the educational landscape. They also pave the way for lifelong education for all and at the same time are spreading the traditional universities, more and more of which use distance teaching methods in their activities, thereby making the distinction between the two types of institutions virtually meaningless. There are an increasing number of university networks of this kind all over the world, and the use of computers in the learning process, access to the Internet by students as a vehicle for self-directed learning, educational broadcasting and video-conferencing are all being stepped by.

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Telematics, knowledge content, and multimedia-based tools are widely considered central ingredients for evolving new ways to provide learning and training. European projects seek to build, express, and voice consensus views on relevant issues that may be presented for its consideration. In particular, it deals with the following issues:

- Optimal strategies for multicultural, multilingual learning solutions,
- New instructional and training approaches and new learning environments,
- Affordable solutions and platforms based on open standards and best practices,
- Publicly accessible and interoperable knowledge repositories.

The consensus building actions will seek to bridge the gap between research and actual use of learning technologies, content, and services.

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2. The trend is to promote cooperation between the best research and teaching universities so that a materials of high quality will be available to all. A European learning portal between universities is being constructed. In addition to the materials also tools for teaching are being developed. For example, questionnaires on how to start e-learning courses and quality instructions are well developed. These e-learning teachers' skills are developed especially in the Universities of Applied Sciences. These skills cross traditional boundaries between disciplines. A key requirement for participation in e-learning teams is the ability to work effectively in a team whose members may have very different skills and backgrounds. The skills depend on the goals and

nature of the training and the specific activities it entails. Thus virtual training programmes, with a strong emphasis on digital learning materials involve a different set of activities and competencies than learning processes, where the emphasis is on the teacher/tutor (Vainio - Listemaa 2004).

3. Common support structures and credit system is being developed between selected European universities which would guarantee mobility and operative infrastructures. Students of any of the participating universities could participate in research-based education. Also search engines for the courses are being developed.

The introduction of eLearning requires also new competencies. A competency is an area of knowledge or skill that is critical for producing key outputs. The competencies can be grouped into generic categories such as general, management, distribution method, and presentation method which help illustrate the relationship among certain competencies.

Transnational education is not necessarily international in the sense that this term has been used before in the context of international education. Courses and learning materials and environment are simply offered beyond national borders. However, a university is more than a library of courses. It is still the college and the professional faculty who can give the quality guarantee to credits and credentials, degrees and diplomas. Governments will have their responsibility in quality assurance especially in courses delivered from non-accredited institutions from abroad.

The quality assurance for virtual education can follow external and internal models. The external models include multi-lateral agreements, accreditation, licensing, kite-marks, and consortia arrangements. The internal models include codes of practice and quality, and management systems. The assessment of on-line universities is often accompanied by three principles. First, the institution must demonstrate how it will achieve its goals, particularly student learning goals, and maintain high standard of quality in doing so. Goals must be stated which are specific and assessable. Second, the assessment should provide assurance that standards of quality are successfully maintained at an appropriate level regardless of the medium of the course or the methods of instruction adopted. This is a concern that students have a reasonable assurance that the course offerings they believe they are taking, based on public descriptions, are accurate regardless of where or under what format the course is offered. Third, the responsibility for the

conduct of assessment should be appropriately delegated and shared.

The philosophy of eLearning focuses on the individual learner although it recognizes that most learning is social. In the past training has organized itself much for the convenience and needs of instructors, institutions, and bureaucracies. Now eLearning is the convergence learning and networks, the Internet. New university systems are being developed to new global needs (Utsumi - Varis - Knight - Method - Pelton 2001). The experience and critical function of the traditional universities is central in the efforts to create new eLearning environments.

The practical solutions are being made now and many standards do not go through an official and formal standardisation procedure. When everybody start using a given standard it becomes de facto the standard without having a prior rule on it. Cooperation between traditional institutions of higher education, the private sector and governments is continuously needed

There is an urgent need to focus on the digital content services of different disciplines and fields of applications in order to avoid biased e-library services. Learning technology standards are critical because they will help us to answer a number of open issues. Whether it is the creation of content libraries, or learning management systems, accredited standards will reduce the risk of making large investments in learning technologies because systems will be able to work together like never before. Accredited standards assure that the investment in time and intellectual capital can move from one system to the next.

Our research and development network under the UNESCO Chair in Global e-Learning in Tampere University, Finland. has focussed on the Global University System (GUS) developed by Takeshi Utsumi. Economic interdependence among nations and cultures is spawning a global economy. Such globalisation inevitably magnifies the negative consequences of population growth, environmental degradation, and unequal distribution of resources and wealth among nations. Globalization also promotes clashes of divergent cultures and belief systems, political and religious. The Global University System (GUS) is a worldwide initiative to create satellite/wireless telecommunications infrastructure and educational programs for access to educational resources across national and cultural boundaries for global peace. The GUS help higher educational institutions in remote/rural areas of developing countries to deploy broadband Internet in order for them to close the digital divide and act as the

knowledge center of their community for the education of poverty and isolation.

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Our experience in Finland with the national electronic library FinELib project as well as the European projects show that there are great differences in the use of digital programmes and services in different countries, different type of universities and polytechnics, and different disciplines. From the comments posted, there appears to be unanimous agreement on the need to change education and that e-learning happens to be in the right place and in the right time. There seems to be a coincidence between e-learning as a tool and the necessity to modify the traditional model of education. In our view the use of digital libraries is directly connected to the new e-learning competences, especially to information literacy. The use of digital libraries is directly connected to the new e-learning competences, especially to information literacy.

Higher education has to aim at quality and that internal and external evaluation methods should be more generally applied, thereby enabling it to be accountable to society. Higher education institutions are expected to train citizens capable of thinking clearly and critically, analysing problems, making choices and shouldering their responsibilities. The ethical role of universities is becoming more and more important.

Higher education cannot, however, be visualised any longer in purely national or regional terms. Future graduates have to be in a position to take up the complex challenges of globalisation and rise to the opportunities of the international labour market. The equitable transfer of knowledge and the mobility of students, teachers and researchers, and with also the mobility of learning environments with the e-learning applications are crucial to the future of world peace.

A major achievement of UNESCO was the World Conference on Higher Education in 1998, and the "World Declaration on Higher Education for the Twenty-first Century: Vision and action", adopted

there (ED-98/CONF.202/3, UNESCO, Paris 1998). According to the Declaration there is an unprecedented demand for and a great diversification in higher education, as well as an increased awareness of its vital importance for sociocultural and economic development. Higher education includes 'all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent State authorities.

The UNESCO 1998 Declaration gives three characteristics for qualitative evaluation:

- Quality of higher education is a multidimensional concept, which should embrace all its functions, and activities: teaching and academic programmes, research and scholarship, staffing, students, buildings, facilities, equipment, services to the community and the academic environment. Internal self-evaluation and external review, conducted openly by independent specialists, if possible with international expertise, are vital for enhancing quality. Independent national bodies should be established and comparative standards of quality, recognized at international level, should be defined. Due attention should be paid to specific institutional, national and regional contexts in order to take into account diversity and to avoid uniformity. Stakeholders should be an integral part of the institutional evaluation process.
- Quality also requires that higher education should be characterized by its international dimension: exchange of knowledge, interactive networking, mobility of teachers and students, and international research projects, while taking into account the national cultural values and circumstances.
- To attain and sustain national, regional or international quality, certain components are particularly relevant, notably careful selection of staff and continuous staff development, in particular through the promotion of appropriate programmes for academic staff development, including teaching/learning methodology and mobility between countries, between higher education institutions, and between higher education institutions and the world of work, as well as student mobility within and between countries. The new information technologies are an important

tool in this process, owing to their impact on the acquisition of knowledge and know-how.

The UNESCO Declaration also addresses the potential and the challenge of technology. It notes that the rapid breakthroughs in new information and communication technologies will further change the way knowledge is developed, acquired and delivered. Among the recommendations to ensure quality and maintain high standards for education practices and outcomes in a spirit of openness, equity and international co-operation it realizes that institutions of higher education are using information and communication technologies in order to modernize their work, and that it is not information and communication technologies that are transforming institutions of higher education from real to virtual institutions.

By eLearning, also e-Learning, we understand best practices for learning in the new economy, implying but not requiring benefits of networking and computers such as anywhere/anytime delivery, learning objects, and personalization. It often includes instructor led training.

History shows that revolutionary changes do not take off without widespread adoption of common standards. For electricity, this was the standardization of voltage and plugs; for railways, the standard gauge of the tracks; and for the Internet, the common standards of TCP/IP, HTTP, and HTML. Common standards for metadata, learning objects, and learning architecture are mandatory for similar success of the knowledge

economy. The work to create such standards for learning objects and related standards has been going on around the world for the past few years (<http://www.learnativity.com/standards/html>, 10 July 2001).

Learning technology standards are critical because they will help us to answer the following issue clusters:

- How will we mix and match content from multiple sources?
- How do we develop interchangeable content that can be reused, assembled, and disassembled quickly and easily?
- How do we ensure that we are not trapped by a vendor's proprietary learning technology?
- How do we ensure that our learning technology investments are wise and risk adverse?

Whether it is the creation of content libraries, or learning management systems, accredited standards will reduce the risk of making large investments in learning technologies because systems will be able to work together like never before. Accredited standards assure that the investment in time and intellectual capital can move from one system to the next.

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