

Institutional Environment Guideline Descriptions of National Environments -FINLAND-

e-Learning in Higher Education in Finland

Finland is in the midst of a transition that is altering the professional structures and work content within Finnish society. This entails continuous challenges for the entire education system, including higher education. The strategic educational policy for the information society has consistently emphasized the importance of developing the information society skills of citizens in the spirit of "a learning citizenship society". Special attention has been paid to ensuring that all students have opportunities to gain the knowledge and skills they need to operate in the information society. The infrastructure of an information society should offer effective technological environments for communication, learning and knowledge production in educational institutions, at the workplace and also in non-institutional settings such as homes and leisure time. Educational institutions are geared to use ICT in a versatile way in their activities, as well as to establish ICT-based procedures in education, training and research. e-Learning is seen as one of the assets to meet the lifelong challenges of being a competent citizen in the information society. Since the mid-1990s, all national-level ICT strategies for education have emphasized that ICT must be integrated in the curriculum. It cannot be a separate area in education but a natural part of knowledge creation. ICT is not seen as a set of technical tools but more as a group of new pedagogical approaches. The value of educational ICT use is judged on the basis of how much it adds to the process of learning, makes students active learners, and increases a participatory, collaborative culture and problem solving.

The Finnish higher education system

The Finnish higher education system comprises 20 universities and 29 polytechnics. This paper deals only with the universities' situation. The university network consists of ten multi-faculty universities, three universities of technology, three schools of economics and business administration, and four art academies. Finnish universities are government-run and primarily financed from the state budget. The universities have extensive autonomy. Parliament passes educational legislation and decides on the overall lines of education and research policy. Performance management and target outcomes constitute the most important tool for the Ministry of Education in steering the operations of the universities. The main policy guidelines and development targets are determined at a general level in the Development Plan for Education and Research, which is adopted by the government for a six-year period every four years.

In 2005, following the Bologna process and with the help of the amended University Act, a major reform into a two-tier degree system took place. The reform also involved the redesign of all degree programmes and the promotion of internationalization at the universities.

In 2004¹, a total of 12,588 Master's degrees and 1,399 doctorates were completed at Finnish universities. The number of university students was 174,300, of whom 149,200 were undergraduates and 22,100 postgraduates. As many as 53.4% of all university students were women.

All universities have their own institutes or centres for extension studies or continuing education. They arrange various courses that range from short courses up to more extensive specialization studies. Over 3,500 continuing education courses were held in 2004. The number of students attending continuing education courses was 87,600.

¹ <http://www.minedu.fi/julkaisut/koulutus/2005/Universities%202004.pdf>

In Finland universities also play a major role in organizing Open University instruction, and courses are offered in almost all fields of study. In 2004, over 82,300 people studied at the Open University.

e-Learning in Higher Education

Finland is one of the world's leading countries in the effort to create a learning society, open to all population groups and making full use of information and communication technology (ICT) for distance education. An important part of this effort is the Finnish Virtual University (FVU), created in 2001 as a collaborative initiative of all the 20 universities in Finland. The FVU serves both regular students and lifelong learners and fulfils a variety of different functions – as a learning provider, an academic network, a technical service and a laboratory for the development of ICT-based education.

The Finnish Virtual University (FVU) has served as a collaborative forum for universities when developing their eLearning approach. The basic idea has been to integrate the educational use of ICT in teaching and learning. Research teams, often multidisciplinary and crossing over university boundaries, have developed tools and resources in order to advance high-quality learning and teaching in Web-based environments. Quality issues in e-Learning have gained special attention.

Laws and politics

Policy for educational use of ICT

The ICT policy of the Finnish higher education system has been outlined in two national strategy documents for education, training, and research covering the years 1995-1999 and 2000-2004. The strategy for the years 2000-2004 consisted of ten nation-wide projects with several sub-projects (see more in section "Action and Infrastructures"). In addition to the national strategies, every university has its own ICT strategy, and within universities, each faculty and department has outlined its own ICT strategy. All the teacher education units devised a strategy for the educational use of ICT by 2001, a year before the other educational institutions.

The National Information Strategy 2000-2004 promoted the use of ICT in education and research significantly. This in turn generated new demands for developing information security and the protection of personal data and privacy, enhancing the quality of and open access to virtual education and materials, and developing copyright legislation to meet the requirements of the information society. These were some of the reasons for updating the strategy by means of a new programme, the Information Society Programme for Education, Training and Research 2004–2006, which now supports and guides future developments in the educational sector. (Ministry of Education, 2004b)

Teacher training policy & ICT

- Who is responsible for TT?
- Are there obligations for HE teachers to follow teacher training (initial, continuous)?

In Finland, it has been acknowledged that teachers are key actors in advancing knowledge-based society and promoting the competencies needed in technological environments. Teacher education institutions have a special task to provide prospective teachers with ICT skills needed in learning communities and to prepare them for the future challenges. An important target has been to advance teachers' and teacher trainers' own ICT skills. Universities and their collaborative initiative, the Finnish

Virtual University, have made new initiatives and have tried to find new methods in order to help learning communities to empower learners in and through technology-based learning environments.

In Finnish universities, the responsibility for teacher training has been divided between several units. For instance in the University of Helsinki the following units are responsible for training: Staff Development Unit, Language Services Unit, Educational Centre for ICT, IT Department and Centre for Research and Development of Higher Education. In addition some faculties have their own support and development units for teacher training. There are also some projects that offer training at the national level (for instance the TieVie project, see below).

Since the first years of the Finnish information society strategy, the main aim has been that all pre- and in-service teacher education should allow for:

- learning and studying in different environments,
- continuous development and evaluation of working communities,
- sharing and adding expertise in communities,
- inquiring, managing and assessing knowledge,
- knowledge of different cultures and communication skills,
- using multimedia and different methods in studying,
- deep content knowledge,
- an innovative approach, and
- opportunities for different new media tools and environments

(Ministry of Education 1999)

As part of the national information society strategy for education and research, a project called "OPE.fi" (TEACHER.fi in English) has provided common standards to advance ICT competencies in educational institutions and universities. The OPE.fi project has three different levels, which helps strategic progress towards teachers' ICT competence. The project deals with both pre- and in-service teacher education (Ministry of Education 1999:10-13). It set the aim for 2004 that all teachers should have at least basic ICT skills, and that half of all the personnel in educational institutions should have more advanced skills. Ten percent of the teachers should achieve an expert level competence. The levels of ICT competence are illustrated in the table below.

Level	Skills / Competencies
I	Every teacher can use computers and other ICT facilities, and has knowledge of the principles of using them in teaching and learning. These skills are related to word processing, e-mail, WWW and educational technology in teaching and learning.
II	At least half of the teachers have more advanced ICT competencies, such as: <ul style="list-style-type: none"> • implementing e-mail, WWW and ICT based platforms for group work, • managing toolkits for the enhancement of teaching • knowledge of the main principles of producing and using digital material in their own teaching area and good competencies in pedagogical applications of ICT, and • keeping up with the development of technological tools and programs
III	Ten percent of the teachers should have special competencies in ICT, such as <ul style="list-style-type: none"> • content- or profession-specific applications, e.g., picture management, multimedia, distance education applications, simulations, • high-standard expertise of pedagogical applications and skills, to support colleagues as ICT users, to work as ICT trainers and developers of schools and learning communities and as partners in expert networks, • special skills in computer programming, • producing digital material, • ICT management and administration in schools, and • anticipating ICT innovations in teaching and doing research on them.

Advantages of ICT Training: Money, Career, Recognition

- Is pedagogical performance taken into account in the evolution of a teacher's career?
- What strategies for rewarding teachers other than remuneration can be implemented (peer recognition, prizes, 'coffee and cakes',...)?

Finnish universities have recently adopted a new salary system based on job demands and personal performance. University teachers gain advantage from having participated in pedagogical training in general or in ICT specialized training.

- Teacher's status and missions
 - Can a teacher be paid for online teaching?
 - Does a teacher have a minimal number of face-to-face teaching hours to do?

In general university teachers can freely choose the method they use in teaching. They can also choose whether they make use of ICT or not. Online teaching is something which teachers can do voluntarily and they are not paid any extra money for doing so. However, some universities like the University of Helsinki award annual educational technology prizes. There is also a national quality prize for developing online education awarded by the Ministry of Education and the National Board of Education.

- Can a teacher receive author rights for multimedia production?

As a general rule, the author's rights are safeguarded by the Finnish IPR legislation. When working for an educational institution, it is highly recommended to have an agreement between the author and the institution to define the conditions for the usage of web-based teaching material.

Actions and Infrastructures

National/regional actions

- Is there any national, regional or local initiative to stimulate uptake of e-learning?

Infrastructure of IT in the country

The second national strategy, *Education, Training and Research in the Information Society 2000–2004*, described changes in the Finnish operating environment and outlined the overall development of an information society in Finland. It envisioned that "Finnish society will develop and utilize the opportunities inherent in [an] information society to improve quality of life, knowledge, international competitiveness and interaction in an exemplary, versatile and sustainable way". (Ministry of Education, 1999). The implementation plan consisted of projects like the Virtual University, the Virtual Polytechnics, the Virtual School, Research and Development in Learning Environments, and Information Society Structures. (Ministry of Education, 2000)

The Finnish Virtual University (FVU)

Following the strategic lines and the universities' own initiative, the Finnish Virtual University (FVU) was set up in 2001 to develop online education and web-based support services for teaching and learning in Finnish universities. The FVU collaboration also aims to develop compatible information infrastructures to support student mobility.

The FVU has five Issue Groups for the implementation of the FVU strategy. They consist of experts from the FVU member universities whose daily work is closely linked to the implementation of each

strategic goal. The Issue Groups appointed to the strategic target areas are: Issue Group (1) on Flexible Studies and Electronic Access, Issue Group (2) on Promoting Online Studies and Shared Use of Educational Materials, Issue Group (3) on Commonly Produced ICT Training Services and ICT Support Services, Issue Group (4) on International Co-operation, and Issue Group (5) on the FVU Organization, Operations, Governance and Finances.

Facilitating student mobility and developing electronic access services for this purpose

The information about web courses produced by Finnish universities is available on the FVU portal. Based on the nationwide Agreement on Flexible Study Rights (JOO), universities' degree students can enroll in courses offered by others besides their home university. To support student mobility, the FVU launched a web-service (JOOPAS) which is now being developed from an information service into an overall electronic access service for students and for universities' academic affairs offices. All this helps the students to diversify their studying and degrees and also to avail of online education. The electronic access to the JOOPAS service is based on a single user ID, which makes it possible for the user to log in to the service using his or her home university user name and password. The user's home organization maintains the personal data and authenticates the user's identity, and the service picks up the current personal data at the time of the login.

Web-based tools to support learning and teaching

The FVU has also developed tools and resources in order to advance high-quality learning and teaching in Web-based environments. These tools and resources support both students and teachers and they are freely available via the FVU portal for the entire university network in Finland.

E-learning quality management

Quality issues in e-Learning have received special attention. The FVU and the Virtual Polytechnic joined forces to produce a set of quality criteria and an evaluation tool for evaluating web-learning materials. The quality criteria are designed for evaluating and improving the text-based study and instruction materials provided on the portals of the FVU and the Virtual Polytechnic. Others may also find these criteria useful, including producers, administrators and designers of e-learning materials, as well as external evaluators. The quality criteria define the characteristics of good web-learning materials including four fields to evaluate: use, contents, production and utility. The criteria aim to ensure that web-learning materials communicate clearly, function technically and allow unhampered access. Quality materials must also fulfill all legislative requirements. The security of web-based materials is also an integral part of the quality criteria. The criteria for web-learning materials complement the overall quality service that the FVU is developing. They are also linked to the VOPLA quality project, which recently published the first draft for comment of an E-Learning Quality Manual.

The E-Learning Quality Manual contains quality matrices for 1) e-learning and teaching, 2) digital materials and resources, and 3) e-learning support services. The matrices contain a three-level quality cycle (documenting present activities, defining criteria and measurement tools, implementing criteria and evaluating the effects of implementation) and five quality aspects of e-learning: management, skills, resources, processes and evaluation. In the matrices, one can find questions that guide the user in his/her quality management work. The quality manual also includes examples of process descriptions for e-learning and teaching, digital materials and e-learning support services, various concepts on quality including the project's own quality concept, and instructions on how to use the Quality Manual. Testing of the Quality Manual will be done in 2006 by six pilot projects from Finnish universities. The aim is to use and test the contents of the manual by adapting it to the test users' own quality management processes. The pilot projects' work will be monitored and tutored throughout the piloting year by the VOPLA mentors, and at the end of the year the pilots will report on their results. The results will be available on the VOPLA website for all the FVU member

universities. On the website (www.vopla.fi) one can find examples of how to start and carry out an e-learning quality management cycle to improve one's own e-learning quality.

Staff training in ICT

The Finnish government set a goal for 2007, by which year 75 % of the in-service teachers should be skilled in educational ICT. Thus, one of the most crucial areas in the Finnish virtual university initiative has been the teacher training in ICT. In 2001, a national training program (TieVie) was launched as a wide university collaboration. TieVie has trained a number of agents and experts nationally for the educational use of ICT in Finnish universities. According to the feedback from the participants, the TieVie project has clearly manifested its importance in building a common action culture and added value to collaboration in the Finnish academic community. The course producers and participants have obtained plenty of models and materials for their own in-service training as well as examples of the possibilities to paaly ICT in teaching different academic disciplines.

Along with the national initiatives, nearly all Finnish universities have set up an educational technology centre to promote the use of and research on educational technology and thereby enhance the quality of university education and teaching. The centres also offer ICT training for teachers.

Thematic networks

A special feature of the FVU are thematic networks (http://www.virtuaaliyliopisto.fi/index.php?node=vy_organization_projects_eng) that co-operate to produce online education. These networks are either multidisciplinary or discipline-specific. The idea of these thematic networks is to combine the expertise of the often small departments of Finnish universities, and thus empower learning and teaching. As the network partners are scattered all over the country the networks favor online teaching and learning materials, which also offers the best service for students. There are also networks producing support services for e-learning, such as a project called Competencies, Scoping and Monitoring of Web-based Learning.

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