Suomen virtuaaliyliopisto
Finlands virtuella universitet - Finnish Virtual University

The Finnish Virtual University

Lessons and Knowledge Exchange Opportunities to Inform Pan-Canadian Plans

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Joanne Curry

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1. Acknowledgements

I would like to acknowledge the assistance provided by the Finnish Virtual University (FVU) Development Unit, the hosts during my information-gathering term in Finland. Special thanks to Mr. Seppo Collan, for arranging the visit, Mr. Kari Salkunen for arranging a comprehensive itinerary and making introductions to key individuals and organizations in the FVU consortium, and to Mr. Matti Sinko for his guidance and input to this report.

2. Background

The purpose of reviewing the Finnish Virtual University (FVU) project was to learn from the design and the initial implementation of a national virtual university initiative with goals similar to the Pan-Canadian Online Learning Service proposed by the Advisory Committee for Online Learning. During the visit programme, interviews were undertaken in order to provide:

1) A comparison of the FVU operational and business models with other virtual universities including the Canadian Virtual University.

2) A status report on the FVU and implementation issues, specifically the ability to partner both universities and colleges/polytechnic together.

3) A list of generalizeable lessons and programme components that could inform Canada's plans for a Pan-Canadian Online Learning Service.

4) The identification of specialized expertise of FVU personnel that would be valuable for a Canadian initiative.

The other goals of this assignment and visit program were:

- To share expertise and experiences on issues of research and implementation of eLearning, online education and virtual universities; and
- To strengthen cooperation between Canada and Finland in the above mentioned areas and identify potential areas and projects for collaboration between Finnish and Canadian organizations.

As the first international visitor invited by the FVU Development Unit to review the plans and early implementation of the FVU[1], the FVU Development Unit provided me with access to key people and translated several key documents. During my stay in Finland, from May 31st to July 3rd, I participated in meetings with the FVU Development Unit and a meeting of the Eastern FVU project. Meetings were also arranged with over 40 representatives of the FVU participating universities and several polytechnics and private sector organizations as well as with the Finnish Ministry of Education representative responsible for the FVU project. The list of individuals met is provided in Appendix A.

During the visit, I made four presentations that provided an opportunity to showcase Canada's knowledge base and highlight Canadian institutions offering online learning products and services. These presentations included one at the Ed-Media pre-conference workshop on Virtual Universities and Polytechnics organized by the Finnish Ministry of Education that had over 150 participants. Another presentation was made to participants of an Eastern FVU research seminar and an overview was provided to the Helsinki University of Technology Learning and Teaching committee. A presentation, which included my initial observations on the benefits and challenges of the FVU implementation, was also made to a consortium meeting with the Rectors and Vice-Rectors of a majority of participating universities in attendance.

The cities visited during my stay included Helsinki and Espoo (my primary base of operation), Rovaniemi, Kokkola, Savonlinna, Tampere, Oulu, and Turku.

This report summarizes the information gathered and discusses the issues being encountered by the FVU, highlighting lessons to inform Canada. Specialized expertise and areas of potential knowledge transfer are identified at the end of the report. The visit programme and report writing represents 15 days of professional time.

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[1] Terence Karran of the University of Lincolnshire and Humberside in the UK spent a study leave at the University of Oulu and co-wrote a policy discussion paper with Juha Pohjonen in 2000 titled "Responding to the Vision of the Information Society: First Steps Towards a National Virtual University". This paper provides useful background on the Finnish higher education network (pp 49-59), lessons from previous virtual university projects (pp 82-86), and compares the impact and cost and benefits of different models of national virtual universities (Table 6 on p 91). A copy of this report will be provided to Industry Canada.

3. The Finnish Virtual University Model

> By the year 2004 Finland is among the top countries in the world as a knowledge-based and interactive society. The success is based on the citizens' equal opportunities for study and individual development by wide access to sources of knowledge and educational services. Methods of high quality on-line education and research which are ethically sound and economically sustainable have become the norm. An essential part in the realisation of this strategy is played by the establishment of virtual- or net- university.
>
> *Vision of the Finnish Ministry of Education in the ministry's knowledge strategy for education and research 2000 - 2004*

Goals of the Finnish Virtual University

The original mention of a Finnish Virtual University came from two separate sources. In 1998, the then Minister of Education, Olli-Pekka Heinonen, supported the need to develop a virtual university. In the same year, Paavo Uronen, Rector of the Helsinki University of Technology, had set up an internal working group at his university to carry out a preliminary enquiry on the possibilities of a virtual university. The Ministry of Education then took the initiative and included the concept as one of its visions in its 2000-2004 knowledge strategy for education and research that is quoted at the beginning of this section. A virtual university task force was established to create a project plan. The members of the task force included experts in online education, university representatives, and persons from the Ministry of Education who served as the task force chair and secretary.

The stated goal of the FVU is to bring flexibility and a variety of new methods to university education that will better serve students, the academic world and the world of work. The FVU was designed to accomplish the following:

- To diversity university studies;
- To develop university curricula;
- To improve the quality of teaching and studying;
- To enable networking in teaching, studying, and research;
- To make better use of ICT networks; and
- To improve the competitiveness of Finnish academia.

The decision in planning the FVU was not to establish a separate virtual university that will grant degrees but to support and connect the work of the existing Finnish universities. There are 20 universities in Finland: 10 multi-faculty universities, 3 universities of technology, 3 schools of economics and business administration, and 4 art academies in addition to the military academy.[2] Given the large proportion of existing universities in Finland for its population (1:248,000 in Finland versus 1:395,000 in Canada), this decision was likely the most saleable one. Everyone who has the right to study in any of the member universities has the right to study at the FVU. The FVU does not have the power to grant degrees but students

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[2]   Among European Union countries, Finland has the highest percentage of population with tertiary education. Thirty percent of the population aged 25 to 64 has completed university or other tertiary qualification.

are granted degrees from their own universities. The task force recommendations also mentioned the plan to involve businesses and research organizations.

The main distinctiveness of the FVU compared to other virtual university initiatives is the following:

- It is a national initiative that involves all of the country's universities;

- It is set in a context of a national information society strategy to improve the quality of teaching and learning at universities and offer learners greater access and flexibility through the integration of technology. It is not solely targeting the development and/or marketing of totally online courses to learners outside of its borders or responding to a competitive threat; and

- While not yet realized or fully planned, the FVU has a comprehensive vision of including teaching as well as research and support services.

An effective FVU was envisioned to offer the following advantages:

4. freedom from the restrictions of time and place
5. flexible programs/courses and possibilities for individual additional studies
6. international exchange of educational material
7. co-operation and co-ordination of development work
8. saving on space and facilities
9. efficient use of time

The FVU was also seen as an opportunity to address more general weaknesses in Finland's higher education system such as the lack of a tradition in collaboration among universities and a slow progression of studies for students. The FVU was not the result of international competitive pressure. While improvement in the competitiveness of Finnish academia is discussed, Finnish university students do not pay tuition and receive subsidies for books and living costs while studying at Finnish institutions. This and the relatively small market for programs in the Finnish language obviously limits opportunities for foreign institutions.

Due to the large expenditures required to develop virtual university programs, there was the need to pool limited resources to achieve economies of scale by connecting the work across Finnish universities. In addition to achieving economies of scale, the FVU was intended to address barriers to online learning applications including technical, pedagogical, social, administrative and regulatory issues. Key personnel involved with the FVU emphasize that the initiative does not require or promote full virtuality as the only model. Most of the persons met during the visit programme were very resistant to the idea of offering fully online alternatives.

Further information on the FVU is available at http://www.virtuaaliyliopisto.fi/english/index.html.

Finnish Virtual University Funding and Governance

The Finnish Government, through the Finnish Ministry of Education, has committed funding to the FVU until the end of 2003. The FVU has funding of approximately $10 million Euros for the first year of its development. Approximately half of the sum has been awarded to the

individual universities for their development and the other half to the 20 selected inter-university network projects. The funding in each of the two following years will be on at least the same level as the first year. Additional funding of $1 million Euros has been raised for the development of a portal. According to the Ministry of Education representative, implementation projects and services were funded based on proposals and budgets submitted by the universities or the Development Unit. Financial forecasting or costing based on existing data did not occur. The Finnish Ministry of Education intends to make the FVU a permanent program and to consolidate the service provision developed through this initiative and the projects within the program.

All 20 research and art universities in Finland as well as the defence academy have joined the consortium that is developing and managing the FVU. Projects, such as the scientific national electronic library FinELib and the Finnish open university, SUVI, will be closely integrated in the new initiative and collaboration is intended with the Virtual Polytechnic Initiative which will be discussed further in this report.

The task force presented its report in December, 1999 and a FVU consortium of all of the participating universities was formally established in January, 2001 to:

- develop university level net-based educational services
- co-ordinate educational services offered on-line, student tutoring and the activities of research networks
- develop course information, student achievement recording and databases
- engage in (on-line) publishing activities

The consortium is also an important mechanism to discuss and propose solutions to practical issues such as intellectual property rights questions, technical support required in the development work, and the development of teachers' knowledge and skills concerning online education.

To carry out the practical development and building work, in August, 2000, a Virtual University Development Unit was established as a joint service unit for the universities. The tasks of the Development Unit, which now has 6 staff, include:

- development of activities and the administrative structure of the virtual university consortium
- policy design and strategic planning regarding functions of the virtual university
- providing support to the projects initiated by universities and the consortium
- investigating and reporting on the activities of the virtual university, monitoring and benchmarking relevant developments in other countries and reporting about them publicizing the activities of the virtual university and maintaining contacts with project partners in order to further develop joint activities
- ensuring efficient functioning of services on a practical level
- preparing model agreements for members (for example, agreements for partner networks, copyrights, and financial transactions)

The Development Unit works in close co-operation with the Ministry of Education's Virtual university task force and with a steering committee of a subset of consortium representatives. The Development Unit also creates and maintains contacts internationally, collecting and

disseminating information on global trends in order to react quickly to changes in the environment while strengthening the operating capability of the network. Further details of the scope of the Development Unit's activities are provided in Appendix B.

A diagram of the FVU initiative is provided below. The consortium and the Development Unit is not established as a legal entity. The FVU Development Unit activities are classified as one of the network projects and coordinated by the Helsinki University of Technology, the institution that is hosting the offices of three of the FVU Development Unit staff.
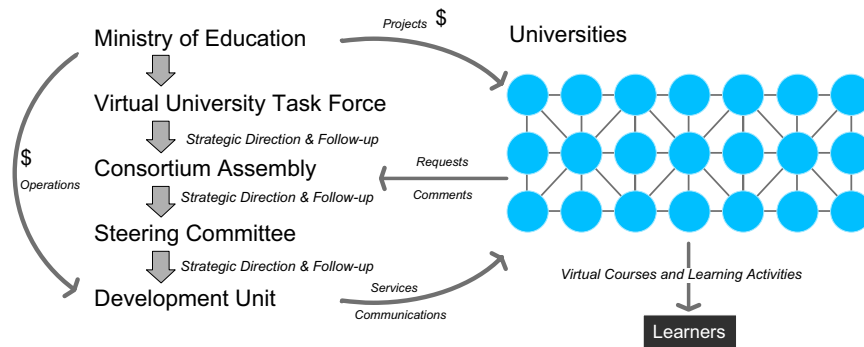
Finnish Virtual University Status

The FVU Development Unit commenced work in 2000 and prepared the consortium agreement that was signed in January, 2001. The Unit also completed the provisional action plan for the FVU in co-operation with the Ministry's Virtual university task force and the Finnish Council of University Rectors.

Parallel to the work of the FVU Development Unit, at the beginning of the year, 20 three-year, joint projects between universities were initiated that will produce the first online courses and form the basis for the activities of the FVU. These projects include 3 regional networks, 5 joint projects aiming at providing services ("meta-projects"), and 11 networks of specific disciplines ranging from social work (SOSNET) to a graduate training program for faculties of law. In addition, the funding provided directly to universities has been used to hire part-time or full-time support people to help in the training and support of teachers and staff who are developing online learning materials. The first programs are expected to begin in Fall, 2001.

A virtual university portal is another major component of the FVU. The portal is intended as a functional and adaptable gateway to the virtual university net-based services with the necessary functions and services for teaching and learning including:

- course selection

- course information including search engine

- registration tool

- student support services (guidance, advisory and information services, portfolio management)

- information and contact channels

- access to national electronic library services

- discussion forums and collaboration areas for teachers

- support services including versatile assessment tools.

The portal will be personalized to the various users including students, various categories of staff (teachers, researchers, administrators) and citizens. The portal will also have a tool for defining teachers' expertness profiles that can be used for defining individual, team, and organization specific training needs.

The aims of the portal, services offered, its structure, technical solutions and method of implementation were defined and were recently presented to the Consortium committee. The current document is provided as Appendix C. The major anticipated challenge in the portal's implementation is the development and funding of the mid-layer of functionality where the responsibilities of the universities and the development unit intersect.

The portal will be launched by the autumn of 2001 with additional functionality added by the end of 2002. The portal as currently envisaged is estimated to be fully functional in the autumn of 2004.

While the FVU is intended to facilitate all academic activity including research, these services have not yet been elaborated.

4. Implementation Benefits and Issues

Early Benefits

While only officially launched in January, 2001, the FVU has been the subject of a much longer planning process that included a task force implementation plan that was ready at the end of 1999. The FVU has already had a major impact in Finland in the following ways:

- Building of awareness of the use of computer networks for teaching

  During visits and meetings with representatives of Finnish organizations, it was apparent that the announcement of the FVU and funding awards have raised awareness and interest among university administrators, faculty, and staff in the practice of and research into the use of computer networks for learning. There is some confusion about the meaning of the terms "virtual course" or "virtual university" and a general belief that a face-to-face component will always remain necessary. However, the FVU has already had a beneficial impact in highlighting the opportunities provided through online learning and encouraging discussion and debate.

- Putting the focus on teaching and learning

  The Ministry of Education as well as key personnel with the FVU state that the prime goal of the FVU is to improve teaching and learning at Finnish universities. Through discussion of the use of online learning and teaching models, there is evidence of increased focus on teaching and learning. As one person interviewed commented, "I have not in my career heard so much discussion about teaching and learning".

- Creating networks for collaboration, faster dissemination of best practices, and acceleration of staff capacity building

  Each of the FVU projects that has been funded has linked faculty and staff across a number of Finnish universities. For example, one project called KASVI links the eight faculties of education in Finland. This level of networking is unprecedented and faculty interviewed mentioned the immediate benefits realized, from bringing new ideas to their institutions to the creation of collaborations that will extend beyond virtual university areas. A number of projects have organized workshops and some of the workshops have attracted several hundred participants.

  Some of the meta-projects in particular could have a major beneficial impact. The goals of four meta-projects are summarized below:

  IT PEDA: To support universities developing strategies for virtual university activities including the creation and support of a network of pedagogical centres at participating universities. A web site is being created that will be integrated with the portal and will contain links, notices, and access to listservs. The project is also responsible for seminars for administrators on strategy development.

<table>
<tr><td>Tie Vie:</td><td>Training of faculty in the pedagogical use of information and communication technologies</td></tr>
<tr><td>IQ Form:</td><td>Creating tools through which students can learn about themselves as learners and acquire skills to become more effective learners in virtual courses</td></tr>
<tr><td>OVI</td><td>Project for developing the virtual environment for assessing and study counselling of students including improving the skills and abilities required for successful studies, career counselling, and study management.</td></tr>
</table>

- Creating a forum for discussion of key issues among administrators

  The bringing together of the top administrators of all of the universities in Finland as part of the consortium has had an immediate impact with much promise for the future. The issues raised at consortium meetings range from the required support services for virtual university activities to copyright issues. Much of the topics for discussion are not restricted to virtual university matters and will impact institutional policies for classroom teaching, such as credit transferability and copyright issues.

- Creating economies of scale for content development, program delivery, and critical support services

  Participation in one of the meetings of the FVU projects, the Eastern FVU project, clearly substantiated the benefits and necessity of pooling resources and efforts given the limited capacity and budgets of individual institutions. This project brings together three of Finland's smaller universities to offer jointly-designed courses, expand the course offerings, and ensure better quality and better use of local resources and expertise.

Major Implementation Issues and Opportunities

There is no doubt that the FVU will face significant challenges, especially given limited resources and a complex and difficult to change operating environment. Several major issues and challenges in implementing the vision of a Finnish Virtual University network were identified during discussions and participation in meetings with the various representatives. The key issues and suggestions for possible solutions are as follows:

Managing Expectations

The announcement of the FVU and the funding award has raised huge expectations despite the relatively limited funding to carry out the initiative and a lack of history and widespread knowledge of how to implement online learning in Finland. The number of full-time staff devoted to the FVU is low and success will be dependent on continued volunteer efforts and goodwill. There are also different expectations and different definitions of virtuality or effective virtual learning among the many participants. The impact of the FVU will probably be overestimated in the short term and, if successful, underestimated in the long-term.

To address the issue of managing expectations, the FVU needs to immediately:

- Identify the various stakeholder groups including funding groups and members of parliament and define their expectations as quantitatively as possible

- Document the baseline of online learning activity that has already advanced with the initial work of the FVU projects and Development Unit, and develop a plan for quantitative and qualitative measures to report frequently on the impact of the FVU initiative

- Develop and implement a communications plan and public relations strategy that includes short overviews addressing what the FVU is and what it is not. Illustrate the funding level through comparisons to investments made in other countries

- Continue to utilize the FVU contact persons in each of the FVU participating organizations to inform academia and local interest groups and bring forward misconceptions and concerns. The FVU should provide the FVU contact persons with communication packages that support their efforts, including a basic presentation and frequently asked questions handout.

Institutional commitment and strategic leadership

The level of knowledge and commitment of university administrators at the participating institutions varies. For many, online learning is viewed as a nice demonstration of innovation or a source of some funding to shore up weak departments. In a few cases, virtual university courses or programs are seen as an integral component of the institution's primary mission or one part of a solution set to address a challenging issue. In part, the lack of attention and funding commitment may be due to the increasingly difficult budgetary environment for Finnish universities. There have been substantial reductions in core funding with requirements for increased output in the number of doctoral and master degrees. There has also been increasing competition for students from well-funded polytechnics.

The FVU has begun to address the requirements to increase the knowledge of university administrators with plans underway for a seminar for consortium committee members. In addition, the FVU and Ministry of Education could take the following actions:

- Each university has been requested to submit a strategic plan on how the institution will implement and integrate virtual university content and courses into its offering to students. The Development Unit should include as a topic at an upcoming consortium meeting a discussion of the process for developing these plans and have a few of the universities that are more advanced in their planning describe their process and their initial plan.

- The Ministry of Education should propose a template for this strategic plan that identifies the critical elements that need to be addressed, such as how the administration will support the acquisition of necessary skills and knowledge by faculty, as well as indicators for evaluating progress. The appendix of the e-learning evolution report of the Canadian Task Force for Online Learning is useful background material as is the report written by Dr. Randy Bruce and published by the Centre for Curriculum Transfer and Technology in May, 1999 entitled "Educational Technology Planning: A Framework". Other Canadian experts such as Dr. Tony Bates at the University of British Columbia, could also be engaged to assist in this process. Administrators would benefit from reviewing any public strategic plans that should be posted to the FVU web site as examples.

- The FVU should prepare a background paper that outlines the range of organizational change strategies that have been utilized around the world and document Finnish approaches as they are developed, implemented, and evaluated.

- Funding for the IT PEDA project could be increased to provide at least a full-time person (current funding is less than $85,000 Euros).

Leadership on effective pedagogical practice: Putting importance of pedagogy front and centre

The intention of the Ministry and the goal of the FVU Development Unit is to put pedagogy at the forefront of all funded and associated initiatives of the FVU. However, as one moves to some of the funded FVU projects and particularly with faculty and staff of universities developing online learning content but not involved in the FVU projects, the awareness and understanding of the pedagogy is less evident. In part, this may be due to the lack of experience base and lower knowledge levels of the models for effective online learning. There is some resistance to "importing" models from other countries as there is a legitimate concern in adopting practices that may not be compatible with Finnish culture.

Most Finnish institutions have had some trial experiences in developing and offering online courses with a focus on videoconferencing classes or publishing course notes and useful course resources as opposed to implementing online learning activities. The departments of technical universities such as the Helsinki University of Technology and Tampere University of Technology have had prior experience with web-based offerings. The University of Helsinki Faculty of Arts, which has 9,000 students, has about 30 courses with a web-based component and approximately 5 online courses. The open university and continuing extension sections of the universities have also had a longer track record of offering online learning and have demonstrated core competencies in instructional design and learner support.

- The FVU should fund and encourage projects and activities that take advantage of situations where online learning can add real value. A number of projects are expanding video-conference classes or providing an online option to a face-to-face classroom activity without examining this value-added factor or best application areas. The Ministry of Education should examine the current portfolio of projects and, working with the Development Unit, target new projects in areas that will demonstrate new pedagogical approaches that have not been utilized in the first set of projects. At the first annual reporting, it may be possible to steer some of the existing projects to use other approaches.

- To communicate the menu of learning models that take advantage of networked computers and to encourage a greater range of usage of learning models, the FVU Development Unit should work with the related projects and pedagogical centres at universities to develop a "pedagogical toolkit". Aimed at faculty and staff, the toolkit would describe each model and provide concrete examples, increasingly from Finnish institutions.

- In funding the train-the-trainer projects and pedagogical centres, the Ministry and the FVU should encourage a component-based approach to the online and classroom training of pedagogical models to encourage sharing of this content among institutions. A number of universities are developing their own pedagogical training programs in addition to having a FVU project that is developing training material as its deliverable.

- The FVU should develop a plan to disseminate effective practice. This plan should build on the current project meetings and presentations at the annual national conference for educators using technology and make use of the FVU web site. The web site could include a section on research evidence, strategic plan templates, discussion groups, and exemplar practices. An annual award series could recognize advancements in pedagogy.

Connection of research (network) and practice (projects)

The connection of research and practice is an opportunity rather than a challenge. There are a dozen research groups in Finland carrying out research supported by the Finnish Academy or European Union funds. (The research that is underway will be documented in a second report.) In most cases, the research is not linked to the FVU projects.

There is an important opportunity to support the creation of a research network that is linked to FVU projects and activities. The formal linkage could ensure that the projects are informed by research, increasingly research with Finnish implementations, and that the research questions arising from the projects are considered by leading researchers.

A proposal has been put to the Finnish Academy to fund a national doctoral program that will be managed by a national network of leading researchers. This would be a good initial or foundational activity of such a research network. There would also be benefit in extending the network to include researchers conducting research on FVU projects and other implementations to increase knowledge exchange opportunities.

To accomplish the networking among researchers, the FVU should consider assigning a full-time person to manage a coordinated set of activities. Some examples of activities could be to create a network of doctoral students that are choosing virtual learning/FVU topics for their thesis. The FVU could publish papers on the FVU web site and also facilitate research by supporting the development of background papers and seminars on research and evaluation tools and methodologies. Canadian experts such as Carl Cuneo and Terry Anderson could be approached to contribute their experience in this area.

Learner Focus

There is a promising research that focuses on learners such as IQ FORM, and a survey has been carried out to determine and analyze the learner needs for the portal. A larger follow-up has been planned through a student and staff panel to evaluate the portal design.

The FVU should consider developing a "consumer's guide" to help students in understanding and assessing the quality of online learning courses and components.

International Strategic Alliances

With its reputation in the wireless industry, Finnish organizations receive a good reception from organizations around the world. The Finnish universities are fortunate in having opportunities to link with other EU countries in research and dissemination projects such the European Commission Project called "Learningspace, Crossboundary European Scenarios on Learning" that gathers together a cross-disciplinary core group of European researchers on learning for knowledge sharing activities.

Given the work involved in entering into and implementing strategic alliances, the FVU Development Unit should focus on entering into a few formal arrangements each year. These arrangements could include post-doc and faculty exchanges, cooperation in knowledge and tool exchange in areas such as learning object repositories, and faculty and expert visits. Further information should be posted to the FVU web site in other languages with projects encouraged to provide summaries and updates for posting. There is a current call for proposals in the area of virtual universities within the European Union that should be fully exploited.

Evaluation

The Ministry of Education has asked each FVU project to prepare a self-evaluation report that documents approaches used and results obtained at the end of the first year. The evaluation measures are those proposed by project participants and there are no "top-down" Ministry of Education measures. There is a small evaluation project, "Feedback from Virtual Learning Environments – instruments for developing the quality of instruction". Based at the University of Joensuu, this project will develop methods for gathering feedback from students and teachers working with online environments in universities. During and after the courses, the students and teachers send feedback via email discussion groups and digital questionnaires and the feedback system will be integrated into the portal of the virtual university and the other systems connected with it such as the virtual counselling and evaluating system for students.

Given the importance of evaluation in managing expectations and feeding into continual improvement of the FVU's investments:

- The FVU should immediately develop an evaluation strategy for the initiative.

- The Development Unit should approach the Ministry of Education for funding a separate project for formative evaluation.

- Further funding could be provided to the small evaluation project underway to develop a basket of measures and examples of evaluation instruments and templates for use by FVU project teams.

5. Approaches and Lessons to Inform Pan-Canadian Plans

The recently released report of the Advisory Committee for Online Learning (*The e-learning e-volution in colleges and universities, A Pan-Canadian Challenge*. Report of the Advisory Committee for Online Learning, 2001) recommended the creation of a Pan-Canadian Online Learning Service to facilitate the development of online courses and programs by encouraging:

a. learners via one-stop shopping with a wide range of information, resources and services;

b. participating institutions and their faculty members with an opportunity to take advantage of economies of scale by making available a wide range of services, knowledge and resources to support the development of online courses and programs; and

c. participating institutions with an opportunity to take advantage of pan-Canadian synergies and economies of scale in the marketing of their online courses and programs at home and abroad.

There are similarities between the proposed Pan-Canadian Online Learning Service and the FVU initiative, especially in (a) and (b) outlined above. Canada has many advantages in moving rapidly ahead in developing and offering new online learning course components and programs including a long track record in research and practice and many of the world's leading experts in this area. Canada, however, faces similar barriers of resistance to institutional change and limited development budgets and we face more intense competitive pressure from US online learning providers. Another area of difference is that Canada has arguably a greater need for more fully online degree programs given the lack of access to programs that Finnish citizens in rural centres enjoy given Finland's distributed system of universities, polytechnics, and learning centres throughout the country.

Based on the knowledge gained during this visit, the following are recommendations and cautions for Canada as it further defines the Pan-Canadian Online Service:

Value-Add Component

Canada can learn from the value-added component that was designed into the FVU with the context of an information society and its goal to improve teaching and learning at the post-secondary level and increase access and flexibility. The projects and Development Unit services could have been more directly linked but the VU is certainly more than a "marketing gimmick" or "smart catalogue". Tough issues of intellectual property rights and credit transfer are also being tackled. Initiatives such as the Canadian Virtual University will be challenged, as was the California Virtual University, if it cannot produce more of this value-added component, especially in creating opportunities for its members to obtain investment and new revenue sources or reduce or optimize expenditure. Currently the Canadian Virtual University's central funding is too low ($75,000 per year) to have any significant impact.

A major decision for a pan-Canadian initiative is whether to focus on supporting leading Canadian online learning providers to reach more Canadian learners or improve their globally competitiveness, or whether to achieve more general goals, such as encouraging all Canadian

institutions to take advantage of computer networks for learning, including the incorporation of approaches that supplement classroom learning.

Governance

The model and organization of the FVU Development Unit appears to be a good one. The Development Unit is structured as a management organization that provides services such as the portal to existing institutions. It would be beneficial for a service organization to have its own legal status as a not-for-profit organization with the institutions as its members. This would facilitate approaches to other funding sources and the creation of its identity, both for international marketing purposes and to build more ownership of the initiative among participating institutions.

The FVU has successfully engaged the top administration of universities and the initiative has not being seen as absolving administrators or individual institutions of their responsibilities. The FVU has involved key players from the start with the exception of the private sector. For example, before initiating the portal design, all information technology managers of universities were consulted and concerns were identified and discussed. A Canadian initiative would need to overcome the barrier of a lack of integration of eLearning into the university's primary mission. The Finnish Ministry of Education's requirement for a strategic plan is useful but the knowledge of eLearning opportunities needs to be understood and accepted for the plans to be meaningful and for universities to also invest resources.

Connection to Research

As in the case of Finland, Canada has not been able to link initiatives on the research and practice of online learning in the post-secondary sector. Investments in the TL•NCE and programs such as Industry Canada's Learnware Program and the CANARIE Learning Program were separately led initiatives. The Advisory Committee for Online Learning's recommendation for research investment should be closely linked to the implementation plans and not funded as a separate, stand-alone program. This will maximize the effectiveness of both the investments despite the likely different sources for funding.

Funding Levels

The FVU funding is not adequate for even a small country of 5.2 million people and will likely achieve limited penetration into the post-secondary system by raising awareness and demonstrating the possibilities. The larger universities consider the funding to be too low to be noticeable and the smaller institutions will struggle to expand or sustain any developing courses or programs. If Canada is not willing to invest a minimum amount comparable to this relative to its population, at least $60 million a year, a more focussed initiative would be necessary. Funding of a larger national or regional initiative at a sub-critical level will distract efforts and impede development. The funding level and impacts of the Alberta Learning Program should be considered as another guideline and there are likely lessons to be learned from such previous investments.

The review of the situation in Finland reinforced the opinion that Canada has had many prior or relatively isolated initiatives that address some of the Pan-Canadian service elements (for example, TeleCampus, CanLearn, TL•NCE, and the Learnware Program). What is needed is an overall umbrella strategy and program across federal and provincial departments with cross-linkages designed in from the start.

If a more targeted initiative is required, some of the early benefits of the FVU should be sought: the awareness building and knowledge sharing, the networking of contact persons/support units, and the critical debate forum of top university administrators. Another option is to look to further support of the open university or extension/continuing education units to reach target groups of lifelong learners with investors such as Human Resources Development Canada.

Evaluation Strategy and Plan from Outset

Any Canadian initiative will face similar issues as the FVU in managing expectations and requiring baseline data to measure impact. Many of the other recommendations outlined in previous section would also be relevant. A key lesson learned at the early stage of FVU implementation is to develop and fund an evaluation strategy from the start as well as adequately support the dissemination of knowledge on pedagogical options and strategic planning.

Linking Universities and Colleges

The 30 Finnish polytechnics have been funded by the Finnish Ministry of Education through a separate Virtual Polytechnic initiative. As part of this initiative, Finland's polytechnics are developing over 20 courses in areas of their strength that were selected from an initial list of over 200 courses identified by the polytechnics themselves. In addition, a portal is being developed and intellectual property right issues reviewed with template agreements proposed. The funding of the Virtual Polytechnic initiative is: 2001: $850,000 Euros, 2002: $2.8M Euros, and 2003: $4.3M Euros. The portal has received separate funding of $2.5M Euros over 3 years.

While the first reaction to the separate polytechnic initiative was that it was a missed opportunity, the situation in Finland appears to be working. The main players are satisfied that each sector can develop targeted initiatives more quickly that will benefit their membership, and the polytechnics and universities are jointly tackling some issues, such as intellectual property rights, a content repository, and meta-tagging standards. These connected efforts are encouraged through the Ministry of Education, the common funding source. The Virtual Polytechnic Initiative and FVU are communicating on the development of a portal but each is funded by different European Union grants.

The situation in Finland may not generalize to Canada, especially given colleges in Canada that are degree granting. Universities and polytechnics in Finland do not have the working relationship and integration that occurs in many Canadian provinces. Canada should strive to fund integrated initiatives for the college and university sector and, if not possible, should

directly fund key integrative efforts such as portal development to maximize its investment and better serve Canadian learners.

Connection to Industry

The FVU has not yet developed strategies for working with the private sector. Given the more collaborative public/private relationships in Canada, this should be more possible to be designed into a Canadian initiative. Some suggestions provided to the FVU to initiating effort in this area is a portal section to post requests for proposals for content development that can be listed from either public or private sector organizations and a database of private sector suppliers.

The Portal

Canada should consider the outline of the FVU portal functionality, especially since it has had review and discussion by Finnish post-secondary institutions. Canada should also consider experiences and software and content assets developed by TeleEducationNB and the Province of British Columbia's Education Portal.

Keeping Track of FVU Developments

The FVU Development Unit is very open and interested in a more strategic relationship with the Canadian government and provincial institutions in Canada. The FVU is in the process of discussions of credit transfer, copyright and intellectual property issues, as well as pricing and e-commerce arrangement and systems among institutions. While no immediate solutions have been found, Canada should continue to track the FVU's progress.

6. Specialized Expertise and Potential for Knowledge Transfer

During this project, opportunities were identified for the exchange of knowledge and collaborations between Finnish and Canadian organizations. In the following two pages, some of the potential expertise, knowledge and content products, and technologies and tools of interest to Finland and products of interest are identified. In a separate report, further collaboration possibilities for areas of research will be outlined.

Follow-up is underway to make introductions between Canadian and Finnish organizations. Immediately prior to leaving Canada, a Canadian-Finnish meeting was organized in Vancouver in which 8 Canadian organizations (TELUS, Royal Roads University, Technical University of BC, Laval University, McGill University, Youachieve.com, NewMIC, and Simon Fraser University) and 12 Finnish companies and institutions participated. In addition, Rafiq Khan of CANARIE was hosted in Helsinki in a series of meetings on June 18th. Several introductions between Canadian and Finnish researchers and practitioners were arranged at Ed-Media in Tampere June 25-30th. A September visit by a number of Canadian organizations, including IBM Canada, has also been proposed and organization of the meetings is underway.

For Canada:

Area	Knowledge or Technology	Canadian Contact
Virtual U service implementation	Matti Sinko, FVU Development Unit	Nadia Lombardi and Yuri Daschko, Industry Canada IHAB and Paul Cappon, Council of Ministers of Education Jaap Tuinman, Canadian Virtual University (CVU)
Portal Development	Totti Tuhkanen, FVU	Nadia Lombardi and Yuri Daschko, Industry Canada IHAB and Paul Cappon, Council of Ministers of Education Jaap Tuinman, Canadian Virtual University (CVU)
Learner support requirements and tools	Process and templates for determining learning styles and tools to support learning styles: IQ Form, Prof. Hannele Niemi	Roger Mundell, Royal Roads University
Mobile Learning	Early application demonstration: Mlearning Research Group, University of Helsinki; Petra Wager, Product Manager, New Learning Solutions, Nokia	Julie Zilber, 7th Floor Media
eLearning Industry Cluster Development	Model and process for defining eLearning industry cluster: Kari Mikkelä, Finnish eLearning Cluster Development Programme, Human Capital Investment Oy	Nadia Lombardi and Yuri Daschko, Industry Canada IHAB; Rafiq Khan, CANARIE Inc.;Paul Cappon, Council of Ministers of Education

For Finland:

Area	Knowledge or Technology	Canadian Contact
Portal Development	Design specifications and early implementation of BC education portal Design of Telecampus CanLearn	Chuck Hamilton , IBM Canada Rory McGreal, TeleEducationNB Steven Walker, HRDC
Learning Object Repository	Prototype of learning object repository	Chuck Hamilton , IBM Canada Randy Bruce, C2T2
Meta-tagging Standards	Meta-tagging standards, interface tools for tagging standards, practical experience in developing meta-data schemas for images and video	Alan Burk, University of New Brunswick Rory McGreal, TeleEducationNB
Evaluation	Knowledge of methodologies and tools, Experience with Alberta Learning Enhancement project evaluation network	Terry Anderson, Athabasca University Carl Cuneo, McMaster University
Strategic Planning	Strategic planning and organizational change expertise Strategic planning process primers and templates: •e-volution report Appendix A (Industry Canada) •Education Technology Planning: A Framework (C2T2)	Tony Bates, University of British Columbia Randy Bruce, C2T2
Copyright issues	Report of working group	Association for Universities of Canada
Credit banking and transfer	Processes, policies, and tools	Jaap Tuinman, Canadian Virtual University (CVU)
Virtual Labs	Tools and environments	Samuel Pierre, Tele-universite
Online Learning as Scholarship	Potential policies and programs	Tom Carey, University of Waterloo
Training of University Teachers	Content	Lucio Teles, Telestraining Linda Harasim, SFU/TL•NCE

Networking in remote communities/advanced placement courses	Models and potential content	Ken Stevens, Memorial University
Training for Kindergarten to Grade 12 teachers	Processes and courses	Learning Window: Gary Gumley, Ingenuity Works Therese Laferriere and Rory McGreal, Teacher Professional Development
Research Networks	Management and Coordination	Joanne Curry (TL•NCE) Carl Cuneo (EvNET)

7. Conclusions

There are more similarities than differences between the Canadian and Finnish post-secondary system and each country has stated goals to move towards an information society and a learning society. Both countries enjoy good educational systems and technology penetration including internet access.

The FVU is one of the few initiatives in the world that is a national strategy to support eLearning in universities. This initial site visit and report documents the model and some of the early benefits and issues. The work has supported the view that Canada can learn from the FVU experience as it continues to develop. There is also tremendous interest by Finnish organizations in relationships with Canadian organizations such as Industry Canada, the Council of Ministers of Education, TL•NCE, Ministries of Education, and CANARIE Inc. to expand the two-way transfer of knowledge that was initiated during this visit programme.

There are key benefits to Canada from initiating a strategic partnership with Finland in the online learning area. Firstly, Canada needs to increase its efforts to showcase Canada's expertise in online learning to global markets. A strategic partnership with Finland provides an important channel to European Union collaborators and markets, particularly in Northern Europe. Secondly, Finland is a source of industry alliances outside of the field of online learning given its status as one of the most wired nations and the opportunity for a national testbed for wireless and other information and communication technologies. Finland's information society goals appear to be achieving results. During June, 2001, the International Institute of Management Development published a new survey of national competitiveness. Finland placed third behind the USA (1) and Singapore (2).

There is also much potential for research collaborations between Finnish and Canadian organizations in the area of online learning. A second report will be provided to Industry Canada and the FVU Development Unit at the end of August, 2001 that will identify the research underway in Finland and highlight the potential for research partnerships and knowledge exchange.

Appendix A: List of Persons Interviewed

Ministry of Education
Liisa Huovinen (Liisa.Huovinen@minedu.fi)

Finnish Virtual University Development Unit
Matti Sinko, Project Director (matti.sinko@hut.fi)
Kari Salkunen, Project Assistant (kari.salkunen@hut.fi)
Julian Lindberg, Project Coordinator (julian.lindberg@utu.fi)

Helsinki University of Technology
Anna-Kaarina Kairamo, Project Manager, Teaching and Learning Development (anna-kaarina.kairamo@hut.fi)
Eija Haapanen, Senior Manager, Leadership and Quality Development, Europro (eija.haapanen@dipoli.hut.fi)

University of Helsinki
Hannele Niemi, Professor, Department of Education (IQ-FORM Project) (hannele.niemi@helsinki.fi)
Raija Latva-Karjanmaa, Researcher, IQ-FORM Project (raija.latva-karjanmaa@helsinki.fi)
Anne Nevgi, Senior Lecturer, Research on Pedagogy of Higher Education (anne.nevgi@helsinki.fi)
Maire Mäkinen, Teacher of English, Language Centre (maimakinen@kielikeskus.helsinki.fi)
Mika-Erik Walls-Carpelan, Specialist in net-based & eLearning (mika-erik.walls-carpelan@helsinki.fi)

University of Oulu
Juha Pohjonen, Campus Futurus (juha.pohjonen@oulu.fi)
Esa Niemi, Development Manager, Educational Technology (esa.niemi@oulu.fi)
Kari Pankkonen, Project Manager, Dept. of Information Processing Science (kari.pankkonen@oulu.fi)
Asko Karjalainen, Manager, Lic. Ed., Teaching Development Unit and Career Services (asko.karjalainen@oulu.fi)
Merja Ruotsalainen, Research Unit for Educational Technology (mruotsal@ktk.oulu.fi)

University of Tampere
Riikka Rahikainen

University of Turku
Aimo Salmi, Vice-Rector (aimo.salmi@utu.fi)
Erno Lehtinen, Professor, Faculty of Education (erno.lehtinen@utu.fi)
Jorma Rinta-Kanto, Head of Section, Centre for Extension Studies (jorma.rinta-kanto@utu.fi)

University of Joensuu

Erkki Sutinen, Professor, Department of Computer Science
(erkki.sutinen@cs.joensuu.fi)
Marja Kallonen-Rönkkö, Head of Education Technology Centre
(marja.kallonen-ronkko@joensuu.fi)

University of Jyväskylä

Hannu Pikkarainen, Consultant, Educational Technology
(hannu.pikkarainen@chydenius.fi)
Anne Niemelä, Senior Programme Coordinator, Network University
(anne.niemela@chydenius.fi)
Jussi Jaakkola, LitM Project (jussi.jaakkola@chydenius.fi)

University of Kuopio

Anu Wulff, Learning Centre, Coordinator Virtual University (Anu.Wulff@uku.fi)

University of Lapland

Heli Ruokamo, Director, Centre for Media Pedagogy (Heli.Ruokamo@urova.fi)
Kyösti Kurtakko, Dean, Faculty of Education (Kyosti.Kurtakko@urova.fi)
Virpi Vaattovaara, Faculty of Education (Virpi.Vaattovaara@urova.fi)
Maire Syrjäkari, Project Manager, Centre for Media Pedagogy
(Maire.Syrjakari@urova.fi)

Polytechnic Representatives

Marja Rautajoki, Head of Virtual Polytechnic Project (Marja.Rautajoki@tpu.fi)
Sirkka Saranki-Rantakokko, Project Manager, Virtual Polytechnic, Rovaniemi Polytechnic
(sirkka.saranki-rantakokko@ramk.fi)
Jari Rinne, Rovaneimi Polytechnic (jari.rinne@ramk.fi)

Private Sector Representatives

Ari-Matti Auvinen, Senior Partner, HCI Productions (ama.auvinen@humcap.fi)

Elisa Communications:
Virpi Karppinen, Marketing Manager, Business Solutions, Research and Development,
Content Based Solutions (virpi.karppinen@elisa.fi)
Jarmo Riipinen, Project Director, Business Solutions, Research and Development, Content
Based Solutions (jarmo.riipinen@elisa.fi)
Klaus Ahlstrand, Development Manager, Business Solutions, Research and Development,
Content Based Solutions (klaus.ahlstrand@elisa.fi)

Kari Mikkelä, Executive Producer, Finnish eLearning Cluster Development Programme,
Human Capital Investment Oy (kari.mikkela@humcap.fi)

Eija-Mari Sinisalmi, Product Manager, Sanoma WSOY Group (eija-mari.sinisalmi@wsoy.fi)
Raimo Karhuvirta, Marketing Manager, Sanoma WSOY Group (raimo.karhuvirta@wsoy.fi)

Teleste Educational Oy
Raimo Körkkö, Director, Strategic Marketing (raimo.korkko@telest.com)
Andrzej Styrcz, Strategic Marketing Manager, Content Alliances and Partnerships
(andrzej.styrcz@teleste.com)
Arto Lamminen, Strategic Marketing Manager, M-Learning Solutions
(arto.lamminen@telest.com)

Appendix B: 2001 Plan for the FVU Development Unit

Assisting the consortium management
preparing for consortium meetings
preparing for the steering committee meetings and implementing decisions made
dealing with copyright and licence issues
consortium enlargement
preparing and implementing the consortium plan of action
developing the consortium's own knowledge and competence

Developing services
initiating network projects
planning of services
starting to provide services to staff members
pilot courses
initiating services for students
introduction of a working group on student mobility, achievements and registration
helping teachers' training on designing and providing net-based education
a national seminar on guidance, counselling and evaluation
supporting the drafting work of educational ICT strategies in universities
supporting and organizing content production in inter-university projects
integrating services into the portal through which they are offered

Designing the portal
initial planning
survey of services
survey of virtual courses
definition of objectives and services
integration of services into the portal
technical solutions and methods of implementation
technical implementation
opening of the basic portal
services available through the portal
initiating further work

Other information services and public relations
information days
seminars and workshops
virtual university home pages: development, updating and transition to the portal
publishing articles and papers
informing projects
developing contacts
the portal
guidance
preparation for the opening of the portal
developing and maintaining contacts
attending relevant events in Finland and abroad

Evaluation and follow-up
devising an evaluation and quality assurance system
gathering material for international benchmarking
commissioning a state-of-the art report "Virtual Universities Today"
evaluation of the first year

Source: http://www.virtuaaliyliopisto.fi/english/index.html

Appendix C: Portal Specifications

THE FINNISH VIRTUAL UNIVERSITY PORTAL PLAN
Development unit June 2001

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THE FINNISH VIRTUAL UNIVERSITY

OBJECTIVES

The objectives of the Finnish virtual university consortium

The virtual university consortium aims to widen the scope and develop the quality of university teaching and research in Finland. To this end methods of guidance-, tutoring- and, teaching as well as learning materials available through new technologies and networks will be developed and taken into common use. The aim is an environment which is flexible, interactive and offers students a variety of learning methods. The environment will be offering users educational and expert services by Finnish and international providers, also in cooperation with business.

The Finnish virtual university consortium is aiming at contracting with

the participating universities and companies. The system will make netowrking possible, allow the identification and application of good practices as well as the implementation of common service solutions. The Finnish virtual university project is basically a broad system of agreements supporting complementary practices, enhancing information flow, dissemination of innovations and mobility of students. It allows flexible and focused support to staff and students in order to successfully engage in on-line teaching and learning.

The objectives of the Finnish Virtual University portal

The Virtual university portal will become a functional and easy to modify access to the network of educational and research services provided by the virtual university, its member universities and other partners.

The portal's services will enhance the integration of teaching and research, allow the subject-specific use of experts, speed up information flow and increase equal access to education. The services for students and staff will make new forms of cooperation possible and support the establishment of common documentation and teaching practices.

The portal plan will be gradually implemented during the years of 2001 – 2004. A large part of the services are based on the functions already existing in universities. The member universities' needs and wishes will be carefully listened to and their functional capabilities will be enhanced throughout the integration process. The implementation of the project requires genuine cooperation between the universities and an innovative approach, also to routine tasks.

One of the structural features of the portal will be service profiles for the users, based on electronic user-identification. The portal will offer services to both the end-users and producers of end-user services.

IMPLEMENTATION

Implementation and division of labour

The first specifications of the portal were completed on 15.6.2001, when the consortium meeting decided on the overall objectives and functionalities of the portal. In the next stage the technical solutions for their implementation as well as the administrative details will be decided during the autumn of 2001. The basic portal will be opened for users in November 2001. The fully-fledged portal will be in use by the end of 2004.

Division of labour for actors responsible for developing the functions of the portal:

Functions	Responsible
Setting targets	users and the consortium
Design, construction and technical solutions	universities, CSC and providers selected at a later stage
Educational services	universities and other partners
Support services	universities, network projects and businesses
Evaluation, testing and development	user panel, CSC and an outside evaluator
Maintenance	the consortium will decide on the organisation of maintenance

In addition to the project management-team there are a great number of

internal and external ad hoc working groups taking taking part in the

construction of the portal: There are groups within the

consortium as well as groups set up by the Ministry of Education.

The division of labour between participating working groups regarding the services provided through the portal and related joint practices will be defined in the project plan, preparation of which has began and will be approved at the next consortium meeting.

Funding

The building of the basic portal will be largely funded by the European Social Fund. The business partner is CSC Ltd. The further development of the portal will be carried out according to plans agreed on at a later stage. The consortium will be responsible for the

maintenance of the portal. The maintenance and funding plan of the portal, the 'business plan', will be drawn up during the autumn of 2001.

Functions and services of the portal

The functions and services of the portal form three sections:

Services relating to studying, teaching and research

      Learning platforms and services together with course finder tools   Student guidance, information and library services

      Tutoring and advisory services
      Technical and pedagogical support relating to learning management systems
      General tools for evaluation and the development of skills
      Search services for students' social benefits and recruitment services
      Information and communication

Administration and enhancing common practices
      Student administration: course information, registration, recording of credits, management of students' virtual mobility
      Financial administration of virtual study
      Practices relating to agreements, models and advisory services: intellectual property rights and user rights

Technology
      Infrastructure
      Technical support

Network services will be accessed through electronic authentication and authorising of individual users. There are four basic user profiles: *citizen, student, staff and the virtual university project.* These four profiles may include sub-profiles e.g. depending on the study method of a student or the job description of a member of staff. The profiles open up a different set of services and functions which the user can modify depending on the individual's needs and rights.

As one user may have a status linked to different forms of study and as the various tasks of a member of staff may overlap with teaching tasks, the use of profiles is organised so that one basic profile is supplemented (through the electronic authentication and authorising system) with functions and services of another profile, or so that the user chooses a portal profile suitable for a given task when s/he accesses the net.

User profiles of the basic portal:

Citizen
A potential student, customer, someone interested in research results or alumni activities

Student

Undergraduate- or graduate student, open university student, adult education student

Staff
Teacher, researcher, other members of staff

Virtual university project
Consortium representatives, steering committee, development unit, coordinators and projects in member universities, PR.

PROPOSAL FOR THE FUNCTIONS AND SERVICES OF THE BASIC PORTAL IN THE AUTUMN OF 2001

The data services of the basic portal to be opened in the autumn of 2001 will include a large number of links to the service pages of the partner universities. The structural solutions may include features which may need modifying in order to make navigating in the Virtual university net pages as easy as possible. The partner universities should, therefore, jointly agree about the general objectives regarding the compatibility and the features needed to make navigation as easy as possible. The portal project will commission an evaluation of the service pages during next autumn. Feedback from the evaluation will be used in the joint development of the portal and the universities' own service pages as well as in the flexible integration of the services. The feedback will also be available to partner universities for their own use. Timetable to the development will be jointly agreed. The commencement of the basic portal will be based on the universities' existing data services and will be developed concurrently with them.

Functions and services of the user profiles:

CITIZEN

General information
- Information service
- Applying for enrolment
- Information about research
- Alumni activities
- Information about the virtual university and its goals

Learning services

- Courses offered by the Virtual university

Library services

- Net services of scientific libraries and FinELib

STUDENT

Undergraduate- and graduate students, open university students and continuing education students

Learning services

- Undergraduate studies
- Graduate studies
- Open university studies
- Continuing education studies

(When the basic portal opens only courses offered by the virtual university network will be shown. The complete list of courses offered by the universities together with complete course information will be accessible through the learning services register as soon as possible. All the courses offered by the universities will be described using a common system of describing and providing information about the courses.)

Registration

- Application and registration process

Course information

- Study periods the student has been entitled to
- Net services of scientific libraries and FinELib
- Search services of scientific networks
- Search engines
- Discussion forums

Support services

- Study skills
- Learning skills
- Guidance and tutoring
- Student union services
- ICT help-line

STAFF

1. TEACHER

Teaching

- Courses offered by the virtual university
- Own courses
- Administration
- Eectronic notice board
- ICT help-line

Teaching material production

- Guidance/tutoring support services and products
- Net services of scientific libraries and FinELib
- Research databases
- Scientific networks search services

- Search engines
- Is-this-already-done?-forum
- Intellectual property rights issues
- Guidance on standardisation
- Technical tools and instructions
- Project financing applications

Professional services

- Training on university teaching methodology
- Recruitment services
- Universities' event calendars
- Discussion forums

2. RESEARCHER

Counseling

- Research seminar working forums
- Project networks, thematic groups
- Intellectual property rights issues
- ICT help-line

Information services

- Net services of scientific libraries and FinElib
- Services provided by CSC
- Research data services
- Network search for scientific networks
- Search engines
- Technical tools and instructions
- Project financing applications

Professional services

- Recruitment
- Universities' event calendar
- Discussions forums

3. OTHER STAFF

Education administration

- Management of student mobility
- User register
- Www-pages of the National Board of Education and universities
- Statistics
- Evaluation
- Www-pages of research schools
- ICT help-line

Contract manual

- Model employment contracts for on-line courses and materials
- Intellectual property rights issues
- Compatibility issues of studies/credits
- Payment procedures and fees
- Project financing information

Information service

- Recruitment
- Alumni activities
- Universities' event calendar
- Discussion forums

THE VIRTUAL UNIVERSITY PROJECT

Communication

- Information services and discussion forums of the virtual university project partners
- Action plans and reports of the virtual university project partners

Information services

- Event calendars
- Net publication providing information and a discussion forum on current issues in three languages (Finnish, Swedish, English)

Evaluation

- Links: National Board of Education, Higher Education Evaluation Council
- Evaluation of the services of the virtual university
- Maintenance of lists regarding improvements required and system faults

List of functions and services provided by universities included in the data service system of the basic portal of the Finnish Virtual university to be opened in the autumn of 2001

- Study guidance and counseling
- Electronic application forms for transferability of studies
- Information pages on counseling study skills and learning skills
- Information pages of institutions: entrance requirements for undergraduate- and graduate studies, open university studies and continuing education studies
- Courses offered on-line
- Information about registrations and fully-booked courses
- Maintenance of learning platforms and courses
- General technical support and ICT help-lines
- Course-specific net publications, indexes on source materials and tutoring arrangements; course specific materials distribution systems and counseling
- Student union services

- Collection of programme-specific FAQ-lists for the universities' user support staff and programme providers
- Advisory service on project financing for development units
- Information services: recruitment, universities information and event calendars
- Www-pages of research schools
- Library services

COMMON DEFINITIONS NEEDED AT THE COMMENCEMENT OF THE PORTAL

The concepts, issues and actions to be defined together before opening the Finnish virtual university portal

1. Finnish virtual university course
- Basic conditions for courses accepted as FVU courses

2. Course information
- Description of the course
      List of courses in the portal, course databases at the universities

3. Student/personal information
- Authentification of the users
- National user index, user databases at the universities

4. Digital learning materials
- Description of the material
- Common method of describing the material and including information about intellectual property rights
- Solutions ensuring the usability and transferability of the material independent of platforms

5. Interface definitions for the universities' management and other systems
- Agreement procedures allowing the virtual mobility of students

A standardisation working group headed by a person responsible for standardisation issues in the development unit will be set up for the virtual university. The task of the working group will be the coordination of the standardisation processes in the virtual university, drawing up of an action plan based on the above five criteria urgently and ensuring that the plans are carried out. The working group will consist of members of different standardisation groups from the consortium's partner universities. The working group will be appointed by the steering committee of the virtual university.

B. Proposal for potential functions and services provided by the FVU portal

In addition to the functions of the basic portal the profiles could include the following new features by the end of 2004. The services provided by the portal to be completed during 2004 are essentially influenced by the experiences of the users of the basic portal.

CITIZEN

General information and advice

- Citizen as a research topic
- FAQ

Educational services

- Universities' educational services
- International education
- Commercial training services

Library services

STUDENT

Undergraduate and graduate students, open university students and continuing education students

Training services

- Prospectuses
- International education
- Other training services
- Course demos
- FAQ

Registration

 Subject areas

- Services of student networks
- Students' course evaluations

Support services

- Electronic personal study plans
- Portfolios
- Student union services
- Health and recreation services
- Accommodation services
- Bookshops in the net
- Other services

Staff

1. TEACHER

Teaching

- Universities' educational services
- Prospectuses

- electronic personal study plan
- Expert databases
- FVU material databases
- FAQ

Materials production

- Workshops of projects producing learning materials
- Model course bazaar
- Educational technology thesaurus
- Expert databases
- FVU material databases
- User evaluations and research on learning environments
- Students' course evaluations
- FAQ

Professional services

- Portfolio
- Self-assessment services
- Peer-assessment services
- Services of professional associations
- Health and recreational services
- Other services

2. RESEARCHER

Workplace counseling

- Universities' educational services
- Prospectus
- Electronic personal study plan
- Www-pages of research schools
- Expert databases
- FAQ

Information services

- Materials database of FVU
- Research databases of data networks
- Research.fi services
- Public research services
- Educational technology thesaurus
- Information on publications
- FAQ

Professional services

- Portfolio
- Self-assessment services
- Idea-to-innovation services

- Occupational social services

3. OTHER STAFF

Administration

- Universities educational services
- Index of Target outcome negotiation
- Materials database of FVU
- FAQ

Contract information

- Use of commercial services
- User research pages
- Educational technology thesaurus
- Information on publications
- FAQ

Information service

- Occupational social services

THE FVU PROJECT

Communication

Information strategies of universities

Information service

Evaluation

List of the universities' functions and services connected to the portal by the end of 2004 (in addition to those mentioned in connection with the basic portal):

- Distributed but comprehensive student register
- Distributed but comprehensive study credit register
- Distributed but comprehensive register of educational services
- Content production of learning material databases jointly with national teaching networks
- Course information by subject
- International student exchange advisory service
- Scientific network services as part of the network
- Thematic/subject-specific discussion forums
- Information on social support services, such as health and recreation services and accommodation
- Regional career guidance
- Subject/course-specific FAQ lists
- Electronic notice boards of teachers
- Work forums of research seminars

- Teachers' networks on teaching arrangements of virtual courses
- Subject-specific teaching and research materials databases
- Planning and needs assessment of discipline-specific material required to be included within the realm of FVU user rights
- Expert databases
- Peer assessment network
- User support for learning platforms developed in the universities
- Input in the development of portfolio training and guidance
- Project registers and research databases
- Personnel services regarding employment contracts
- Advice on payments

COMMON DEFINITIONS REQUIRED BY THE ENLARGED PORTAL SERVICE

Jointly defined functions and services that are required for the enlarged portal to be taken into use by the end of 2004

Study credit register

- compatible solutions for the universities
- ensuring compliance with intellectual property rights requirements

Student register
- National register
- Compatible solutions

Functional targets for www-pages
- Usability
- Navigability
- Definition of common basic information
- Assurance of regular updating of pages

Functional targets for databases serving research, teaching and materials production
- Accessibility
- Compatibility
- Comprehensiveness

Principles of division of labour and practices regarding agreements on provision of support services
- Services of universities' and national project networks

Principles for the selection and agreements used when outside educational services (international) are added to the FVU list of services
- Selection and assessment of compatibility with the universities' educational standards/requirements