

Introduction

Excitement about online education, the overdose of the term “virtual university”, and the expectations of its cost-saving properties and almost one-for-all solution to various problems in today’s education arena, are undiluted everywhere. Indeed, the term “virtual” is filled with unsubstantiated hopes and resources so much so that anybody with healthy skepticism would choose not to use it. This said, however, recent expanding, interactive computer networks possess an understandably hefty power that governments, corporations, educational institutions, and students are all alike responding in unprecedented ways. So, in what ways?

This paper reports a recent investigation to twelve different attempts in “virtual university” development. Although “virtual university” can be defined in many ways, which has been discussed in depth at NIME’s VU seminar (www.nime.ac.jp), this paper takes a rather loose stance; that is, virtual university is defined as a mode of higher education that utilizes satellite video-conferencing and/or the Internet as a major method of delivery. It could be a single institute or a consortium. It could have a physical campus or only a small number of coordinating staff. It might offer degrees totally on line or require face-to-face interaction. To encompass various courses of endeavor incorporating ICT, the broad definition should be more favorable and practical.

This paper looks to the West. Technology-based distance education has been around for a long time, but its growth has surged in the 1990s, first in the US and Canada, then followed by the UK, Scandinavian countries, the Netherlands, Germany, amongst others. Having said this, there is no intention to ignore experience of other areas, especially that of Australia, Singapore, Hong Kong, and South Korea. The only reason to look to North America and Europe is nothing more than the present author’s familiarity with the area.

This paper is not in the least comprehensive, nor does it intend to be. Twelve institutions were chosen for respective unique characteristics as follows:

eCollege.com

Formerly known as Real Education, it is one of the most successful ASPs (application service providers) in the US. Due to lack of expertise, higher education institutes badly require such highly friendly platforms for online educational practice. This eCollege.com currently partners with 175 colleges and universities in the US, and tries to expand its services into K-12 education and overseas operation.

National Technological University

In contrast to newly formed “virtual universities” burgeoning throughout the continental US, most renowned of which are Jones International University (www.jiu.edu), Western Governors University (www.wgu.edu), and the University of Phoenix (www.uophx.edu), NTU has held a B2B (business to business) model to secure the solid base for sales strategy. Partnership with such ICT giants as IBM, Motorola, and Hewlett-Packard has helped NTU continue to be a successful aggregator of top-ranking universities in technology education.

ITESM

Quite similar to NTU, and more advanced in the use of the Internet, is the Virtual University of the Monterrey Institute of Technology (ITESM). It’s a Mexican aggregator of prestigious technological universities in North America, and it is open to general public as well as business channels. More than 1,400 downlink sites are in operation throughout Latin America and various faculty development programs, provided for all levels of school teachers, are one of its strengths.

Athabasca University

Well known as the Canada’s Open University, Athabasca U has started providing several online courses. Backed by its 30 years of experience as a leading distance education institute, Athabasca has developed a well- established learning support system, to which much attention is given in this report. A course example is included to illustrate how computer-mediated communication facilitates learning.

CNED

As one of the most active members of EADTU (European Association of Distance Teaching Universities, www.eadtu.nl), CNED, the French National Centre of Distance Education, recently built Campus Electronique to provide all services for higher education on line. Its strength especially resides in close contact through computer-mediated communication. Campus Electronique also prepares a curriculum bank to support overseas educational institutes of the French language and culture.

EDEN

European Distance Education Network is a non-profit British initiative, which members

come from 36 countries, thus making EDEN the most comprehensive European open and distance learning association of its kind. In close contact with other networks such as EuroPACE (www.europace.be) and EADTU, among others, it integrates various research activities as well as educational programming in computer-mediated learning environment.

Budapest University of Technology and Economics

Being the top candidate for EU membership from the post-communist Europe, Hungary has boldly leapfrogged outdated systems of higher education to build a high-end telematic delivery system. This university realizes the national initiative through its Distance Education Center, BME-TK, which provides instructional support and multimedia equipment for the faculty. It also facilitates knowledge transfer in collaboration with outside experts.

VIRTUE

An international virtual university education and research program initiated by the University System of Maryland of the US, Goteborg University of Sweden and the University of Bergen of Norway, is called the VIRTUE, the Virtual University Education. It centers around marine biology of the North Atlantic in view of ecological sustenance of the area. This endeavor has followed a natural course of development, focusing on the necessary collaboration in the specific field of science, that provides a good example of jointly complementing a single campus education.

Lund University

Lund U is one of Sweden's largest and most prestigious universities. Its CITU, Center for Information Technology in Education, supports and stimulates the teachers to use ICT, including the training of LUVIT, a well-known platform of online teaching. Using these electronic tools developed within the university, CITU is now ready to launch the Lund Virtual University.

KTH Online

Sweden's Royal Institute of Technology started the IT-University in 1999, whose continuing education section is called the KTH Online. It attracts highly professional participants from a wide range of companies in ICT fields. The number of course offerings is still small, but sufficient staffing makes them well-organized in each aspect of program development and learner support.

Helsinki University of Technology

Dipoli, the Lifelong Learning Institute of Helsinki University of Technology is one of the largest providers of continuing education in the field of technology in Europe. Web communication is currently used as a supplement for video-conferencing and classroom instruction. The institute also collaborates with the Finnish Broadcasting Company to produce and broadcast open university courses.

University of Helsinki

Based on the experience and network of various continuing education centers, University of Helsinki, the largest and most prestigious in Finland, has recently set up the Educational Technology Center for ICT. The center prepares the base for pedagogical development before establishment of the Finnish Virtual University in 2004.

The United States is by far the most advanced in this area, which has already been reported elsewhere (see NIME's VU seminar, for example; also see the Useful Links below). The United Kingdom, especially the Open University (www.open.ac.uk), is one of the frontrunners in Europe, and so is Germany. Experiences of these two countries are to be included by respective specialists in a project report from NIME early next year. The present paper focuses on relatively little known Nordic experiences instead, in addition to a number of key institutes in North America and Europe.

Useful Links

information resource:

International Council of Open and Distance Education <http://www.icde.org/>
International Centre for Distance Learning <http://www-icdl.open.ac.uk/>
International Data Corporation <http://www.idc.com/>
Distance Education Clearinghouse <http://www.uwex.edu/disted/lobline.htm>
National Center for Education Statistics <http://nces.ed.gov/>
The Chronicle of Higher Education <http://chronicle.com/distance/>
The College Board <http://www.collegeboard.org/>
The Commonwealth of Learning <http://www.col.org/>
IDG.net <http://www.idg.net/college>

online course database:

CyberU <http://www.cyberu.com/>

OnlineLearning.net <http://www.onlinelearning.net/Index.html?s=324.0080n000c.0798116270>
Globewide Network Academy <http://www.gnacademy.org/>

student services:

bookstore <http://www.varsitybooks.com/>

academic discount <http://www.edu.com/>

student life <http://www.studentadvantage.com/>

Notes.

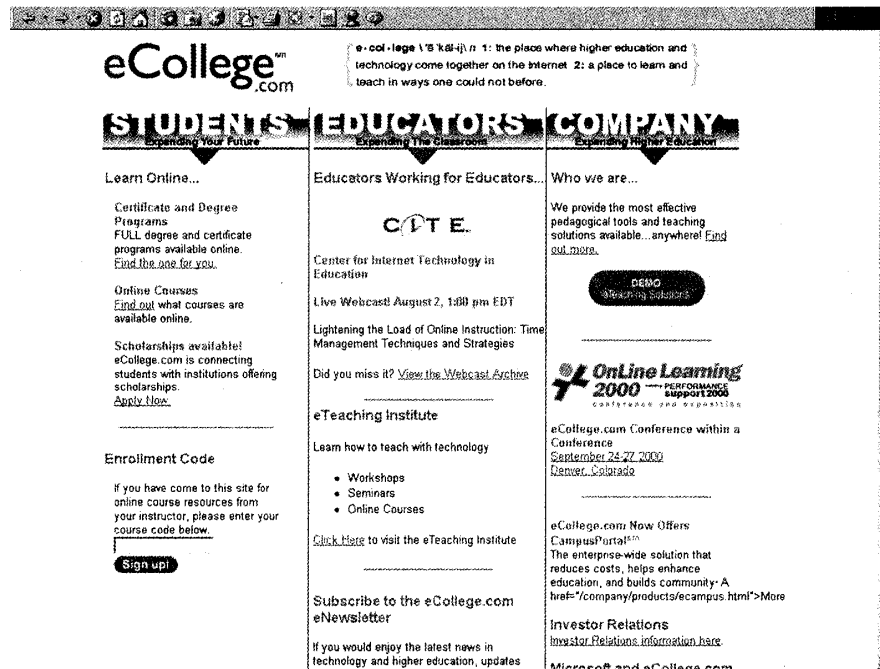
All site visits were funded by the Short-Term Overseas Research Program of the Ministry of Education, Japan. The following case descriptions draw upon both the Web pages and interview summaries. Site visits were made during the summer of 2000.

1. eCollege.com

<http://www.ecollege.com/>

10200 A East Girard Ave. Denver CO 80231

eCollege.com was founded in 1996 as Real Education and is headquartered in Denver, Colorado, US. Its clients count over 175 colleges and universities including a few in Canada and UK. It has already attracted more than 50,000 students in total.



This is a provider of technology and services that enable colleges and universities to offer an online environment for distance and on-campus learning. Its software and services allow colleges and universities to outsource the creation, launch, management and support of an online education platform. The technology and services consist of online campuses, courses, course supplements and support services, including design, development, management and hosting services, as well as ongoing administration, faculty and student support. eCollege.com can create and deliver a complete online campus, including training of faculty and administration, typically in 60 business days. Its technology enables the customers to reach a large number of additional students who wish to take online courses at convenient times and locations. The customers can also use the technology to supplement their on-campus courses with an online learning environment.

The eCollege.com online learning platform has the following key elements:

Products and Services The company provides a suite of software consisting of online campuses, courses, course supplements and services, including design, development,

management, and hosting services, as well as ongoing administration, faculty and student support. It can create an online campus which replicates key services of a physical campus, including admissions, registration, bookstore, library, academic advising, career counseling, student union, bursar's office and financial aid services. It can also work with faculty to convert courses for online delivery or provide online supplements for on-campus courses. It hosts the online campuses, courses and course supplements on its reliable infrastructure.

Homepages of company information, educator support and student portal are shown below:

eCollege.com **FREE TRIAL eCompanion**

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Products & Demonstrations

1. eToolkit
2. eCompanion
3. eCourse

DEMO eLearning Solutions

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- **7/26/00** eCollege.com™ Announces 2000 Second Quarter Results... [more](#)
- **7/25/00** eCollege.com™ Strengthens Management Team by Promoting Mark Bredsky to Vice President of Sales... [more](#)

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Learning Online

"The opportunity to develop, and assist others in developing courses online, has been a challenging and rewarding experience that has enhanced my own teaching style and has been an exciting and challenging option for students."

-Sister Bernadette McVoy, Instructor and Academic Advisor, Liberal Studies Program, Neumann College

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- Online Courses

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Check it out!
What's it like to take a course online? Check out our Student Demo and find out!

STUDENT DEMO
Community DISCUSSION TOPIC: Have you ever taken a course just for the challenge? Tell us about it.

Easy Online Course Development It typically works with faculty members to convert courses into presentations designed for delivery over the Internet using an array of course design tools and support services. Automated authoring tools are believed to be user-friendly, enabling faculty with little or no programming experience to develop and update high quality courses through a standard Web browser. Backed by CiTE (Center for Internet Technology in Education), eTeaching Institute provides various training courses regarding tool use and educational improvement by way of the around the clock help desk, customized workshops, online courses, and Webcast lectures and discussions. Anybody can try out demonstrations and sample utilization of its teaching solutions:

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Toolkit

Guided Tour of eToolkit
A **FREE** set of online communication tools that allow you to easily create a secure and private environment for your traditional on-campus course.

Companion

Guided Tour of eCompanion
Designed for faculty who teach in a classroom and want to use the power of the Internet to make teaching easier and better.

Course

Guided Tour of eCourse
Designed to promote the richest human interaction possible in the online environment, including the best communications tools available, while remaining totally Web-based.

Welcome **Student** Educators **Company** **CITE**

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eCollege.com partners with educators such as California State University-Hayward, University of Colorado, Drexel University, Keller Graduate School of Management, Seton Hall University, University of Pennsylvania, and more.

ASP (Application Service Provider) of this kind has been recently flourishing under three fueling circumstances. First, US expects to have 25% more high school graduates by the year 2007, making the current physical capacity of higher education institutes hardly sufficient. Secondly, there is a long-standing tradition of extension services for the community where the institutes reside in. Thirdly, Internet connections are well established that learners have no trouble being wired to online resources. Those are the main reasons why a number of ASPs (eCollege.com, WebCT, Blackboard, Convene, etc) have already been on market, supporting teacher efforts to organize online courses. Among them, however, eCollege.com is unique in providing a comprehensive support for educators such as academic management, instructional design and learning support in addition to its Microsoft-friendly platform on highly credible hosting servers.

Useful Links

Blackboard <http://www.blackboard.com/>

Campuspipeline <http://www.campuspipeline.com/>

Convene <http://www.convene.com/>

WebCT <http://www.webct.com/>

NCS Pearson <http://ncs.com/>

For Comparisons of platforms <http://www.ctt.bc.ca/landonline/compare2.html>,

<http://www.lmu.ac.uk/lss/staffsup/webtr.htm>, <http://www.staff.ncl.ac.uk/s.n.fitzpatrick/link3.html>

2. National Technological University

<http://www.ntu.edu/>

700 Centre Ave. Fort Collins, CO

National Technological University (NTU) is one of the leading providers of advanced technical education and training from a distance. A sixteen-year-old accredited, degree-granting university, NTU offers a wide range of for-credit and professional development courses delivered via leading-edge telecommunications technologies from a working alliance of 53 universities (including 11 of *U. S. News & World Report's* top 25 graduate engineering programs) and leading training organizations. This alliance represents the largest, most prestigious network of technical education and training providers ever assembled.

NTU's customers are many of the world's leading technology-based corporations and key government agencies: IBM, Hewlett-Packard, Motorola, Raytheon, Boeing, and the U. S. Departments of Defense and Energy.

NTU's delivery of programs directly to the work site (coupled with the ability to record broadcasts for student viewing at home) eliminates student travel costs and significant time away from the job. Removing these components of traditional corporate training costs can save NTU customers as much as 45 percent of their total training expenses. In a climate of accelerating product development schedules and shrinking product life cycles, NTU draws upon unmatched faculty and training resources to deliver the technical education and training programs critical to organization's strategies.

Academic Programs and Professional Development Solutions

The way engineers and technical professionals work, the tools they use and the organizations they drive are changing swiftly and dramatically. The National Academy of Engineering has estimated that the current half-life of an engineer's skills is 2.5 years in software engineering, 5 years in electrical engineering and 7.5 years in mechanical engineering. Rapid innovation in these fields suggests that virtually all technical professionals have an ongoing - and accelerating - need to update and refresh their skills.

Accredited by the North Central Association of Colleges and Schools, NTU awards master's degrees in 15 key engineering, technical, and management disciplines. The NTU portfolio of nearly 1,400 graduate-level courses offers a rich mix of theory and applications courses, overviews, and hands-on training.

NTU has granted more than 1,400 master's degrees to individuals who have completed their program of study while working as full-time employees. NTU does not award bachelor's or doctoral degrees. Most academic courses offered by NTU are delivered on NTU's instructional television network via satellite to sponsoring organizations located in many parts of the world. There is no resident campus. Students don't have to be admitted to NTU degree programs to take an NTU for-credit course. Students can enroll in the course to earn academic credit (which can be applied toward a degree later), or audit courses for in-depth technical updates.

While recognizing the importance of flexible delivery, NTU has developed Master's Degree programs online in computer science, computer engineering, software engineering and systems engineering. These four degrees have been available by satellite delivery and continue to be offered in that medium as well as via the Web or any combination of Web and satellite delivery. NTU plans to expand online courses to 20-30% of the whole provided courses in a couple of years (although professors are reluctant to switch to online material development due to its labor hours).

To facilitate learning, students have three contact points with course instructors. Firstly, a site coordinator is appointed in the organization to disseminate information about the program and tape the broadcast. Secondly, course instructors keep e-mail contacts and conference calls to supervise the learning process. Lastly, student advisors help learners to overcome learning obstacles as well as bridge between students and the instructors if any conflicts are detected.

As regards learning evaluation, course instructors send examination instruments to the company proctor, who sometimes plays the role of site coordinator, too. Students take examinations under the proctor and secure its confidence and validity. So far, NTU observes that their students usually outscore on-campus students probably because of more mature dedication and repeated studying of taped materials.

NTU recently bought PBS The Business & Technology Network to create one of the most powerful resources for professional development training. PBS annually broadcasts nearly 500 live, interactive short courses and workshops via satellite and the Internet. This training includes three major channels: The Business & Management Channel, The NTU Information Technology Channel and The NTU Engineering Channel.

Following are the homepages of NTU academic programs and professional development solutions:

NTU

ACADEMIC PROGRAMS

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Academic Highlight:

Master of Science Degree in Management of Technology
 NTU is now accepting applications for its executive Management of Technology (MOT) Degree Program for the Class of 2002. The program begins a new class only once a year and this year the first residency will be in Vail, CO, August 20-25, 2000. *Sign up today!*

There are 6 residencies associated with the MOT program (one of the residencies is a 2-week International Study Mission). In the past students have gone to Japan, Korea and Europe.

M.S. Degrees Available Online!
 While recognizing the importance of flexible delivery, NTU has announced that its Master's Degree programs in:
 - Computer Science

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Other Offerings:

- [Undergraduate Bridging Courses](#)
- [Certificate of Completion](#)
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- [MS in Optical Science](#)
- [MS in Telecommunications](#)
- [MS in Project Management](#)

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- [Fall Viewing Guide](#)
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welcome to

PBS The Business & Technology Network

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- [The NTU Information Technology Channel Courses](#)
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- [All Courses](#)

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Welcome to the learning environment served by PBS The Business & Technology Network. The recent merger of PBS The Business Channel and National Technological University Corporation has created one of the most powerful resources for professional development training. We are committed to bringing you the best in performance improvement learning and technical education with widely expanded options for professional development programs and graduate courses.

Professional Development Solutions:

- [The Business & Management Channel](#)
- [The NTU Information Technology Channel](#)
- [The NTU Engineering Channel](#)

Featured Programs:

The Business & Management Channel

Brand Everything: Reinvent Yourself, Your Work, Your Organization.
 Join the legendary Tom Peters for this exclusive, full-day seminar on the most important navigational strategy you can employ to compete in today's business world. Let Tom Peters help you reframe the meaning of brands and branding once and for all in this passionate, compelling, up-to-the-moment, *LIVE* event.
Program date: August 16, 2000 *Live*

Forget for Success.
 Learn how to move beyond the past and look toward the future by walking away from outdated, counterproductive beliefs and people practices. Presenters Eric Harvey and Steve Ventura teach techniques to help you forget excess mental baggage and become a more successful leader.
Program date: August 17, 2000

Power Dead Even Rule.
 This seminar explores gender communication and its impact on the workplace. Best-selling author Dr. Pat Heim examines how communication differences between men and women cause confusion and conflict and explains ways to avoid the pitfalls of miscommunication.

3. Tecnológico de Monterrey, Universidad Virtual

<http://www.sistema.itesm.mx/uv.htm>

Av. Eugenio Garza Sada 2501 Sur 64849 Mty, N. L., Mexico.

The Monterrey Institute of Technology (ITESM) has the mission of educating individuals who are committed to the social, economic, and political improvement of their communities, who are internationally competitive in their areas of specialty. Carrying out research and extension relevant to Mexico's sustainable development is also part of the Institute's mission. ITESM is a national educational system that incorporates 26 campuses situated in 25 cities in Mexico with international extensions and accreditation in the Southern Association Colleges and Schools (SACS) which awards Undergraduate, Masters, and Doctorate degrees.

The Virtual University of the Monterrey Institute of Technology brings together a system of educational teaching-learning processes which operates utilizing the most advanced technologies in telecommunications, electronic networks, and multimedia. It offers courses at the high school, undergraduate, graduate level and continuing education as part of the Virtual University's commitment in supporting campuses of the Monterrey Institute of Technology. It extends educational services to Mexico, Latin America, USA, and Canada. The Institute has created the Virtual University with a dual purpose: to extend the coverage of the best faculty from the System itself and other universities, and; to deliver quality education to new settings.



The Institute's Virtual University also receives support from prestigious faculty members from such universities as the University of Texas in Austin, Stanford, M.I.T., Brown, Purdue, Georgia Tech, Wisconsin, Queens, George Mason, the University of California at San Diego, San Francisco State, and the Autònoma de Barcelona. These professors enrich undergraduate as well as master's courses with live seminars and lectures.

The Virtual University offers strong faculty development programs, covering both teaching skills and relevant specialization in disciplines such as mathematics, sciences and languages for elementary and secondary school teachers in Mexico and other Latin American countries.

In addition, the Virtual University has a business channel designed to enhance the competitiveness of small, medium and large firms by delivering educational programs based on labor competencies and aired on a commercial network directly to the workplace. There are currently around 982 in-company classrooms.

The ITESM Virtual University offers the following academic programs:

- Undergraduate Programs
- The Graduate School of Business Administration and Leadership
- Master of Education with Specialization Areas
- Master of Educational Technology
- Doctorate in the Innovation of Educational Technologies
- The Graduate Program of Engineering and Technologies
- Master of Computer Science
- Continuing Education

Total student body numbers over 80,000.

The ITESM Virtual University Network

- 6 Broadcasting Channels
- 1,429 Receiving Sites (1,302 in Mexico, 127 in other Latin American countries -Argentina, Chile, Colombia, Costa Rica, Ecuador, Honduras, Panama, Peru, Venezuela-)
- 2 Satellite Transmitting Sites
- 13 Video Conference Sites
- 18 Associated Sites
- 91 Undergraduate and Master Programs Sites
- 327 Faculty Development Sites

Learning models

The courses offered by ITESM Virtual University are complemented by individual or different technologies integrated for each specific program using different learning models and taking into consideration the market in which they are directed. In this virtual university, the conjunction of learning models and technologies that support the realization of these programs, have been classified as follows:

Professor-centered model

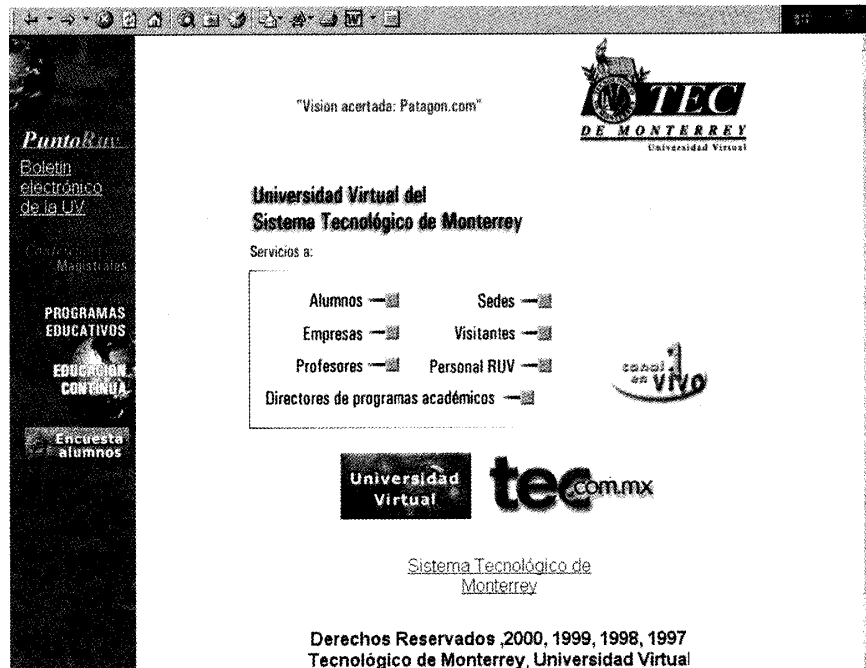
The professor is positioned as the main transmitting source of information, knowledge, capabilities, values and attitudes. Considered as the technology that allows the development of this model, the professor can transmit information as the broadcasting site professor that supports the work of the satellite professor in order to assist and guide the students in the receiving site. The satellite professor presents the content of the course of the emitting site and is not located in the same physical space as their student. The transmission of the class is carried out by a satellite and the videolinking professor presents the content of the course, conference, discussion groups, etc. from a physical space different from where the students are located.

Student-centered model

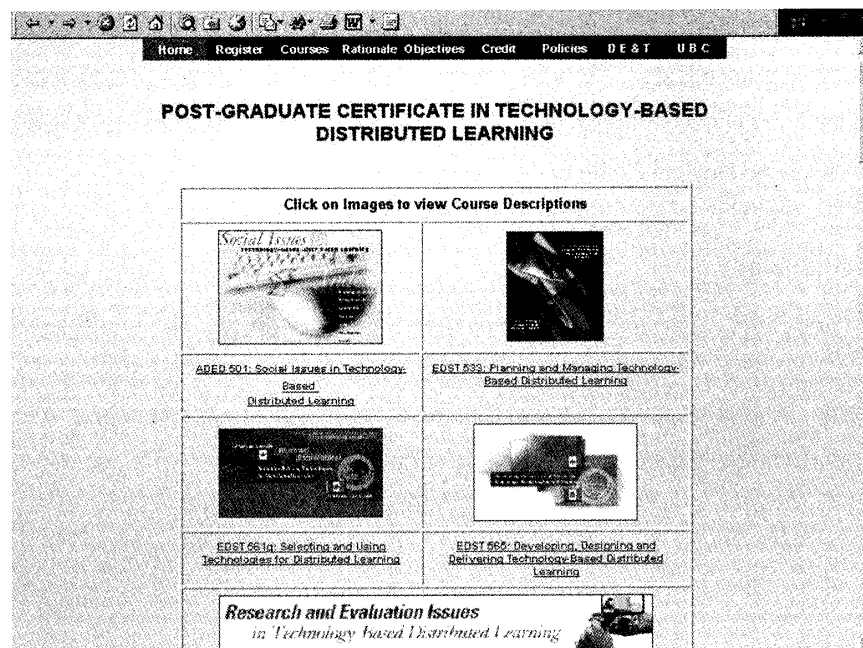
The students, guided by their professor learn by themselves performing individual autonomous learning activities. To achieve this, technologies such as textbooks, class notes, CDs with tutorial exercises, videos, and the Internet allow the students to investigate and analyze information related with the course content.

Group-centered model

The students learn course contents and develop attitudes, tolerance, and collaboration in group work by participating with their group members who pertain to different locations and cultures through electronic group discussions moderated by their professors. These activities are carried out through different Internet applications such as NetNews, FirstClass, Lotus Notes, and Lecturer, just to name a few.



Since 1997, the Virtual University has launched a joint educational program with the University of British Columbia, Canada. This is one of the few courses that depend totally on line. Five courses have been prepared to offer the Certificate in Technology-Based Distributed Learning (<http://www.itesm.estudies.ubc.ca/info/>). This attempt is quite prospective as an international postgraduate education in a CSDL environment.



4. Athabasca University

<http://www.athabascau.ca/>

1 University Drive, Athabasca, AB T9S 3A3 Canada

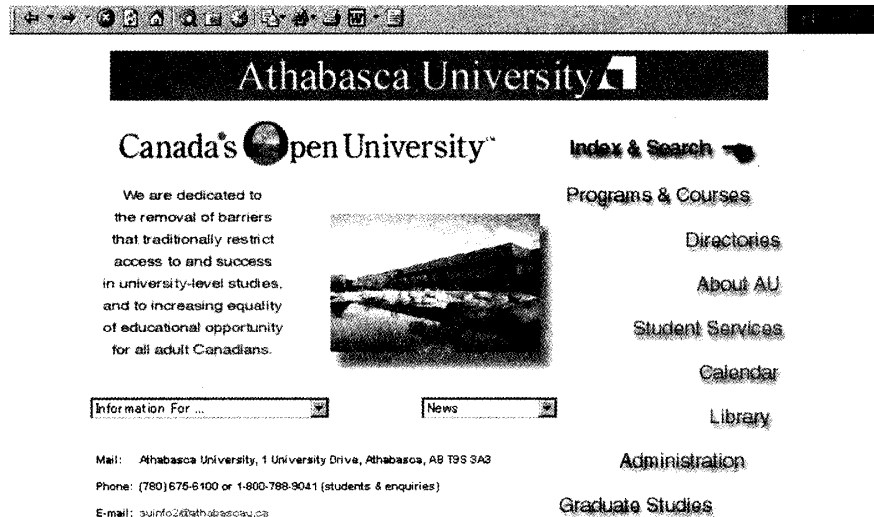
Athabasca University is the Canada's leading distance-education university; in 1999-2000 it served almost 20,000 students, and the number is rising at a rate in excess of 20% per year. Some 150,000 students have benefited from AU's individualized courses and programs since the University was created by the Government of Alberta in 1970.

Athabasca University offers full bachelor degree programs in Arts, General Studies, Science, Administrative Studies, Commerce and Nursing. Masters programs are offered in Business Administration (MBA), Distance Education (MDE) and Health Studies. A number of Certificate programs are offered as well.

Athabasca University's programs are predominantly home study, in which all materials and a collect call link with a tutor are included in the fees. Seminar and teleconference delivery modes are also provided, and several programs are offered with Computer-Mediated Communications (CMC) support, including both the MBA and MDE.

Facts and Figures in 1998-99:


- AU had 16,081 students (preliminary figures for 1999-2000: 19,552)
- There were 33,620 individual course registrations - up from 21,797 in 1995-96 (preliminary figures for 1999-2000: 41,487)
- The educational level of undergraduate students on entry was: high school or less - 14%; some post-secondary - 67%; university degree - 18.9%.
- The student gender balance was 64.3% female: 35.7% male.
- The age profile of undergraduate students was: under 25 - 31.1%; 25-34 - 35.1%; 35-44 - 23.9%; 45+ - 9.9%.
- 37 programs (48, including majors), and more than 450 courses, were offered mostly in print materials, 35 completely on line
- There were 610 members of staff
- The financial turnover was approximately \$35 million.



Athabasca University

Canada's Open University™

We are dedicated to the removal of barriers that traditionally restrict access to and success in university-level studies, and to increasing equality of educational opportunity for all adult Canadians.



Information For ... News

Mail: Athabasca University, 1 University Drive, Athabasca, AB T9S 3A3
 Phone: (780) 675-6100 or 1-800-789-3041 (students & enquiries)
 E-mail: auinfo2@athabascau.ca

- Index & Search
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- Directories
- About AU
- Student Services
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Learning services

Working with the Academic Centres, the Learning Services department is responsible for the overall coordination of courses, tutors and students. Learning Services staff will assist students with questions or concerns that they may have about the tutor whether in a course by home-study or paced delivery.

Athabasca University has two primary means of delivering courses to students: home-study (or individualized study) and paced study (or group study). Most Athabasca University students take courses in which they decide when to work on their course, submit assignments and write examinations. In other words, the schedule on which they work is individualized. While many students work on courses out of their homes (hence the name home-study), some study at their place of work, a local library or another suitable location. Other students prefer the discipline and structure that working in a group provides. Unlike their home-study counterparts, students taking paced courses are required to complete their work on a pre-set schedule.

Interactions of home-study students and tutors occur by phone, fax, voice mail, email, computer conferencing and regular mail. In some courses, tutors organize and facilitate lab sessions, workshops, or discussion and study groups.

The tutor's name, address, telephone number and hours of availability are included in a letter which students receive soon after they register (usually with the registration confirmation letter) or about two weeks prior to the start date in the case of a pre-registration.

Students can telephone their tutor toll-free from anywhere in Canada and the United

States during the tutor's scheduled hours. The tutor attempts to contact students as soon as possible after the course start date. Students residing outside Canada or the United States must contact their tutors at their own expense. In some courses the student's primary contact with a tutor is through a computer.

Students taking courses as a group, work with their instructors through a variety of paced delivery means (eg. classroom seminars, video-conference seminars, audio-teleconference seminars) and they must complete all of the course requirements within the time-frame set by the instructor and/or the course professor. Typically, this means that students complete paced courses on a semester basis and often this involves using facilities, equipment and other resources provided by a collaborating institution, or an Athabasca University Learning Centre.

Paced study instructors are required to provide their students with a course outline/syllabus on or before the first session which shows how they will be evaluated and the dates by which the various activities must be completed.

Advisors and Counsellors

Student advisors help students in person, by appointment, over the toll free phone, and via email, to:

- develop program plans
- select courses
- interpret evaluations and student profiles
- interpret AU policies and procedures
- complete Student Finance study plans

Student counsellors help students to:

- clarify their educational and career goals
- decide on a program of study
- develop sound study and personal management skills
- identify and overcome barriers to their learning
- locate resources and services to assist as appropriate

Study Skills development is a significant part of counsellors' work. Distance education students must budget their time, stay motivated, as well as complete their academic requirements. Counsellors can help students by recommending materials and providing individual assistance.

A course example

A course titled "*Online Teaching and Learner Support Technologies in Distance Education*" is a case in point as one of the most advanced online courses at Athabasca. This course provides fundamental concepts, basic principles, background information, and models for the successful use of technology as a medium for teaching and support of various learners in distance education and teaching programs. Students need not be teachers or trainers, but should have a basic familiarity with computer technology applications in distance education, or have direct experience working or learning with technology. The term 'online' in this course refers primarily to computer-based communications tools, but also includes the more familiar 'low-tech' options.

Before the course starts, students receive a course Study Guide, a couple of texts, and a Reader containing articles and other additional reading material referenced in the course. The Study Guide includes guidance of online conferencing and library use with useful tips for CMC and technological setup. The Welcome conference is intended as a forum in which students and instructors can introduce themselves and begin to learn about each other. This conference can remain active throughout the course as a place to share information, ideas and concerns about how the course is progressing or how changes might be made to it. The Welcome conference is also a place where students are encouraged to communicate who they are and their particular interests.

In the learning process, which is fifteen weeks in length, learners are invited to occasional FireTalk sessions to complement asynchronous interaction. They are usually scheduled on Monday evenings (MDT, midnight at GMT). Learners are supposed to prepare discussions beforehand concerning prearranged topics set by the instructor. To attend this real-time discussion, learners need to download the FireTalk software and preferably install NetMeeting as well. All conference transcripts can be provided by the instructor on a regular weekly basis and/or at the end of the course.

In the past, students have created their own 'study groups'. Essentially, they have spontaneously joined forces with each other to exchange ideas and discuss issues that interest them. They indicate that this has been a very useful and effective support mechanism. Any students who wish to participate in such a support group are encouraged to do so. Usually there is someone in the class who has knowledge about systems and who can facilitate these arrangements and interactions. The 'Helpdesk' may also be able to advise on this.

Assignments in this specific course are as follows:

Computer-Mediated Conference participation; or summary posting;

A student may post an 'application' of the contents of a Unit of the course instead of participating in the CMC conference for that unit. (10 marks, due each Unit)

Article or Reading summary;

The article or summary is based on a reading from outside the course required readings, as chosen by the students. The summary is posted for other students to read and comment upon, and the student is responsible for monitoring and moderating response to the posting. (10 marks)

Unit exercises and assignments;

The student completes exercises and assignments of choice. These exercises are short assignments requiring comment upon or application of principles from the Unit. (80 marks)

5. Centre National d'Enseignement a Distance

<http://www.cned.fr/>

Teleport 4 - Asterama 2, Avenue du Teleport, BP 300, F-86960 Futuroscope
Cedex, France

The Centre National d'Enseignement a Distance (CNED) was created in 1939. It is a public administration under supervision of the French Ministry of Education and Research. Initially located in the southern suburb of Paris, the headquarters of CNED are now permanently based near Poitiers in the setting of Futuroscope - the European "Parc of Image", which gathers the most modern and diverse technologies of "image languages". It has 2,500 employees (civil servants) and 4,000 employees on contract.

The General Direction of CNED coordinates eight training and production units (CNED Institutes) disseminated throughout the French territory: Lille, Vanves, Rouen, Rennes, Lyon, Grenoble, Toulouse, and Poitiers. Each institute deals with a very specific field of competences and prepares training courses, homework and corrections and evaluation tests. Additionally, CNED has the use of an audio-visual centre (also located in the setting of Futuroscope) including a recording studio with the most advanced production and post-production means (i.e. for digital processing of images) enabling direct satellite transmissions.

Besides videotapes integrated in its training modules, CNED organizes numerous interactive video transmissions aimed at:

- students in French schools abroad (about 400 reception sites already exist);
- foreign students (within the framework of the French speaking law school program twelve countries of eastern and central Europe and in the Middle-East are concerned);
- specific audiences (on 11th May, 1994, an interactive video transmission connected France to twenty-seven states in USA, within the framework of the American educational program on environment: "Promises to Keep").

CNED uses a vocal "servor" (students may use it for evaluation or to leave messages, particularly in the case of language courses) and a "Teleaccueil" centre which allows a computer-aided processing of incoming phone calls, be it for information requests or during interactive video transmissions. Thanks to this device, CNED may deal with up to 11,000 calls per day.

CNED has created a Training School on Distance Education Methods and Techniques in order to enhance and develop its know-how in distance education. This school consists of a practical laboratory for pedagogical activities and proposes a training offer for pedagogical and

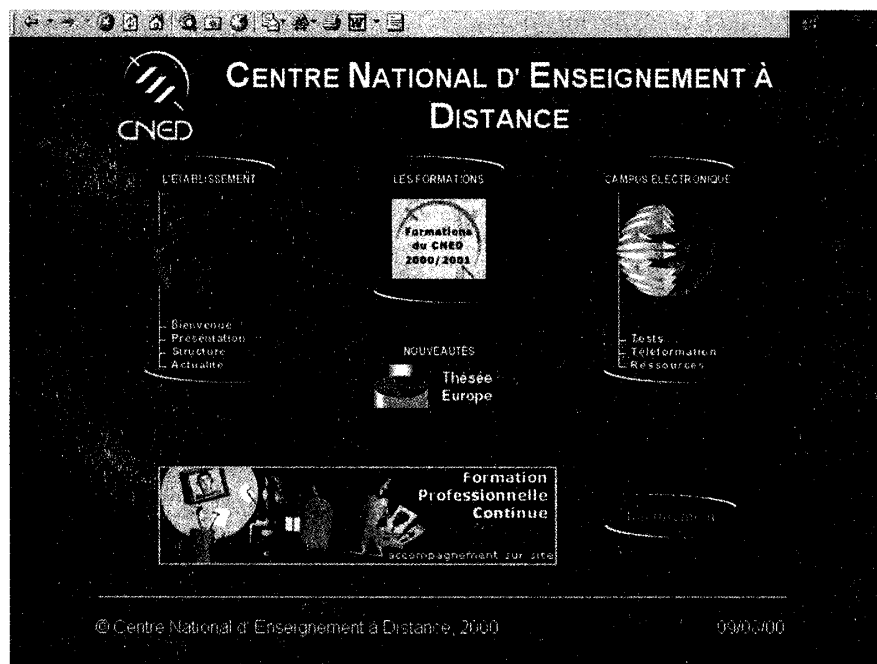
logistical topics.

Another initiative developed by CNED is the Campus Electronique: an electronic platform of training and educational services, accessible via telematics and based on the technical infrastructure of the Futuroscope.

CNED operates at all levels of the educational system: from primary up to higher education and in all fields of training (initial training, vocational and continuing training). With more than 360,000 registered students, CNED is the first distance education institution in Europe.

Student characteristics are:

- 40% of the students are between 19 and 25 years old
- 16% are under 18 and 44% are above 25
- Around 26,000 students live outside France
- CNED has students in more than 170 countries
- 75% of the students have the Baccalaureat
- 30% have a higher education degree (Bac+2 or Bac+3)
- 40% of the students are working
- More than half of CNED students, in France and abroad, follow higher education courses



CNED has developed up to 2,500 training modules and 500 complete curricula, covering every sector, every level and type of teaching and training, and these modules may be adapted on demand to specific audiences or to specific employment contexts. CNED has signed some partnership agreements with 82 higher education institutions in France and proposes preparation courses to 215 university degrees.

Campus Electronique

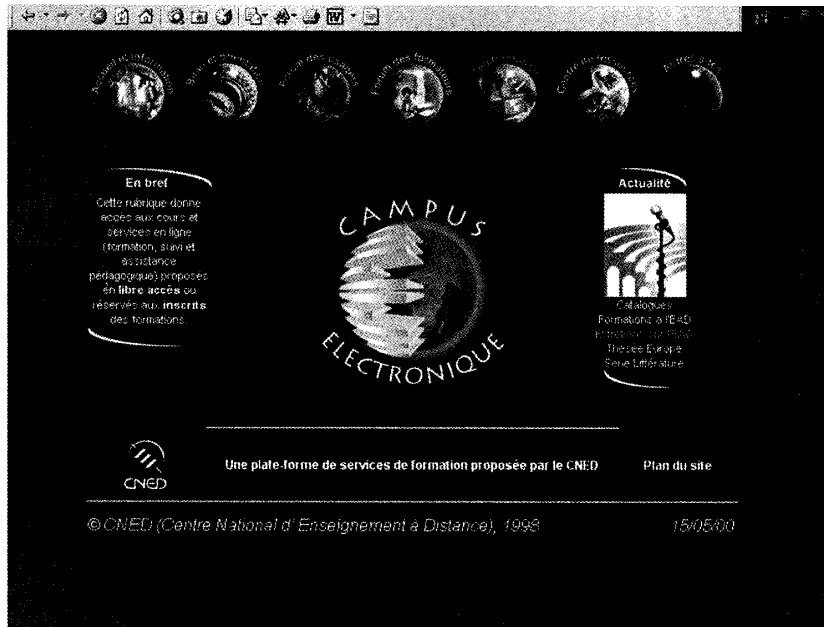
Campus Electronique is an open platform of the information highway supported by the Futuroscope infrastructure. Its Website provides all levels of educational opportunities in addition to consultation regarding activities of CNED.

49 partner universities and 8 study centers of CNED design, produce and implement educational curricula by the combination of traditional method and leading edge technologies. Since 1995, CNED has improved a series of managerial and educational services such as registration, publicity, guidance, educational support and testing. Students receive personalized learning support, including phone calls and electronic instruction, which are backed by frequent collaborative studies and advanced media

CNED utilizes every possible measure to alleviate isolation in distance learning. The major source of learner support still is printed materials, whereas more and more multimedia resources and electronic communication enrich its educational activities by accommodating the needs and preferred methods of student learning. For example, 600 downlink stations receive two-way satellite broadcasting. Campus Electronique, started in 1997, provides all services for higher education totally on line. Its strength especially resides in close contact through computer-mediated communication.

Campus Electronique also offers a curriculum bank on the higher education level in French language. It thus helps overseas institutes teaching French language and culture. CNED plans to establish an electronic multimedia library of French language and literature, which is to be of use for various French universities and research institutions.

However, the development of efficacious use of computer-mediated communication is still a major task to face. The best possible measure to facilitate learning process by mixed media has just begun to be in full attention. Research focusing on this topic shall be fruitful for supporting distance education in the French language community worldwide.



6. European Distance Education Network

<http://www.eden.bme.hu/>

H-1111 Budapest, Egry J.u.1. Hungary

The European Distance Education Network (EDEN), as a non-governmental educational association, was formally established in May 1991 following the first pan-European conference on distance education in Budapest in 1990. Its aim is to foster developments in distance education through the provision of a platform for cooperation and collaboration between a wide range of institutions, networks and individuals concerned with distance education in Europe. Its annual running cost is approximately £ 100,000.

According to the Constitution of EDEN, the association is open to members from all the countries of Europe. It is embracing all levels of formal and non-formal education and training, including vocational and non-vocational sectors. It is open to educational institutions, companies, other bodies and associations as well as individuals.

EDEN is the only European organization where membership is open to anyone - both institutions and individuals - with an interest in open and distance learning. There are two sections of the membership: the Institutions Section and the Network of Academics and Professionals - NAP (individual section). Main types of institutions in the membership of EDEN include educational institutions, national ODL (open and distance learning) associations and European networks. The members come altogether from 36 countries: 31 in the wider Europe, further from Canada, the USA, Israel, Malaysia, and South Africa. In terms of size, range and geographical representation of its members, EDEN is the most comprehensive European open and distance learning association of its kind.

In legal terms, EDEN is a non-profit company limited by guarantee, registered under English law with its registered office in Milton Keynes, UK. The Secretariat of the Association is hosted since May 1997 by the Technical University of Budapest, after seven years of functioning at the Open University, UK in Milton Keynes.

Collaboration with European networks and international institutions

EDEN has established special relations with other networks in Europe: EuroPACE 2000, EUCEN - European Universities Continuing Education Network, EADTU - European Association of Distance Teaching Universities, EADL - European Association for Distance Learning, SEFI - European Society for Engineering Education, further CADE, the Canadian Association of Distance Education. EDEN is associate member in the Association of European

Universities (CRE).

By special agreement EDEN is associated with the International Council for Distance Education, ICDE. The first EDEN-ICDE agreement was signed in 1993 and a new agreement concluded in 1997. Regular contact has been developed with the European Commission (DG Education and Culture) and with the Council of Europe, who sponsored EDEN's Annual Conferences in 1997 and 1998.

EDEN, according its agreed strategy, is not intending to become too heavily involved in EU-funded project work as a project coordinator or manager, although it can fulfill a useful role as a partner in a project. The reason for this approach is that EDEN does not intend to be a competitor with its members in receiving EU funding. There are several EU projects, especially in SOCRATES, Leonard da Vinci, and TEMPUS, where EDEN has been invited to participate in the consortium and support (mainly through networking, collection of information and dissemination of results) the implementation of the projects. This scheme, which can be regarded as a kind of membership service, makes also possible the participation of those EDEN members in the projects, who are not members of the consortium itself.

EUROPEAN DISTANCE EDUCATION NETWORK
EDEN

EUROPEAN DISTANCE EDUCATION NETWORK
*A network for open and distance learning community in Europe,
open to institutions and individuals*

EDEN - Fresh News
Open Classroom Conference, Barcelona
Preliminary Programme

EDEN - Profile of the Association
Introducing EDEN
Executive Committee
Secretariat
Constitution

Membership
Members list
Life members
Membership application

**Network of Academics
and Professionals**

Conferences
Open Classroom, Barcelona
Registration
Annual Conferences
Open Classroom Conferences
The Prague 2000 Research Workshop
Open Classroom Working Group
The EDEN Research Network - "N-Net"

Publications and Information Services
Newsletter
European Journal of Open and
Distance Learning - EJOEDL
Members Listserv
Conference Proceedings

NAP Discussion Fore opened - NEW!

In 1998, an "Agreement for the Establishment of a Cooperation Programme" between UNESCO and EDEN was signed. According to the Agreement, the Cooperation Programme - within the framework of the UNITWIN/UNESCO Chairs programme - intends to develop twinning and other linking arrangements between the participating universities, to use distance education as a means to develop centres for advanced studies and research in various disciplines and to establish, wherever the requisite conditions are met, joint UNESCO-EDEN Chairs to foster scientific advancement through research.

Network of Academics and Professionals

The EDEN Network of Academics and Professionals (NAP) has been set up to support activities of interest to individual members of EDEN, in line with EDEN's general aims and activities. NAP consists of individual members of EDEN and experts delegated by member institutions. Institutional members are entitled to nominate up to four individuals to participate in the activities of the Network of Academics and Professionals.

Within EDEN, NAP was organized as a meeting and communication forum for individuals in the field of open and distance learning. The development of EDEN into an active membership organization resulted services offered to all NAP members, now altogether over 430 from 37 countries. These services and benefits of membership include: access to over 400 institutional and individual members from all European countries, annual conferences at reduced fees, regular electronic and printed newsletters, members' listserv and WEB services.

NAP is enjoying a certain functional autonomy within the Association, being coordinated by a Steering Committee, elected by a ballot of its members. The Chair of the NAP Steering Committee, as ex officio member of the Executive Committee of EDEN, represents the interest of NAP members at the Executive. Representation of the NAP in the European ODL Liaison Committee is also a sign of appreciation towards the probably largest network of individual experts in the field of ODL in Europe.

The approach to functioning of NAP is to involve members actively in the network, based on EDEN's communication channels and on the well introduced identity of activities of the Association. The work within NAP has been structured along Special Interest Groups (SIGs). SIGs were reorganized late 1999 and Web conferencing facilities established to support electronic fora for ODL professionals.

The Open Classroom Working Group

The Open Classroom Working Group was established in 1998, under the chairmanship of Erling Ljosa, former President of EDEN, with the participation of European experts, researchers and academics of school level ODL from EDEN member organizations. The Group is chaired since 1999 by Nikitas Kastis, from Lambrakis Research Foundation, Greece. The assignment of the Working Group includes the establishment of the necessary “mechanisms” to link national and regional events, conferences, networks, and initiatives, such as the European SchoolNet (EUN), the European Experts Network for Educational Technology (EENet) and the MENON Network (European Multimedia Support Network for Education), which are aiming at the Open Classroom of tomorrow, at the European level.

Developing European Policies

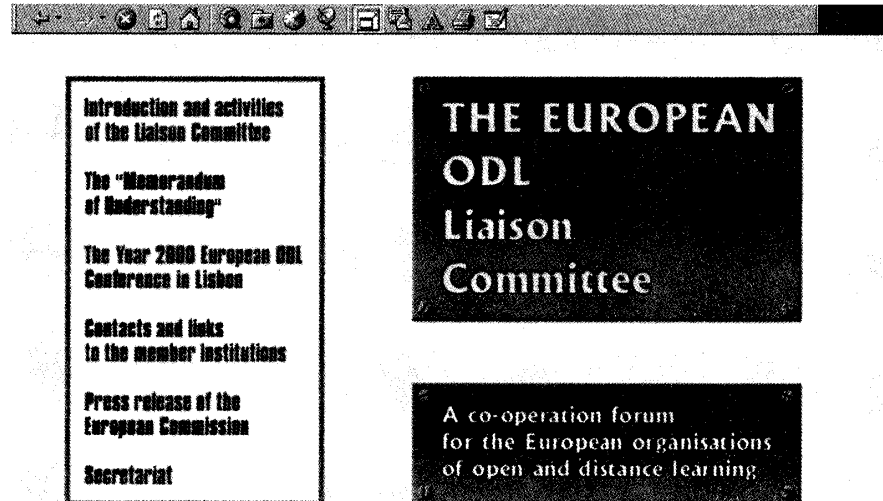
EDEN has played progressive role in developing European policy in open and distance learning, by the promotion of networking and co-operation, the support of East-West collaboration, the preparation and publication of policy and feasibility studies, and active participation in European distance education programmes.

1 The European ODL Liaison Committee

On 21 January 1999 in Brussels, nine European organizations signed the “Memorandum of Understanding on the establishment and functioning of the European ODL Liaison Committee”. According to the Memorandum, “...the aim of the Liaison Committee is to create a forum for the exchange of views in the field of open and distance learning, express common opinions and goals of the European ODL organizations and improve communication between the networks. It is intended to facilitate the engineering of Europe-wide projects, promoting partnerships in this field in conjunction with other European initiatives and to give recommendations to the European Commission and Member States and assist in defining and implementing action plans and programmes in order to enhance the integration of ICT in learning”.

The founding members of the Liaison Committee were the Association of European Correspondence Schools (AECS), the Coimbra Group, EuroPACE 2000, the European Association of Distance Teaching Universities (EADTU), the European Distance Education Network (EDEN), the European Federation for Open and Distance Learning (E.F.ODL), the European Universities Continuing Education Network (EUCEN), the International Council for Open and Distance Education - Europe (ICDE-Europe) and the Network of Academics and

Professionals (NAP). EFECOT - European Federation for the Education of the Children of the Occupational Travellers joined the Liaison Committee in June 1999. The Association of European Universities (CRE) is involved as observer in the Liaison Committee.



2 Supporting East-West cooperation

EDEN was established with a particular mandate to facilitate East-West cooperation in distance education based on the historical situation in which it was created. The support of cooperation with the countries of Central and Eastern Europe has traditionally been considered strategically important and a number of arrangements and actions have been implemented respectively. With the ongoing transition process in the region, the accession of the CEE countries to the European Union this attention has been kept on the agenda of the Association. Through a range of feasibility studies and successful conferences an understanding of the current situation and a reputation was established which is a valuable resource and an efficient network for institutions and individuals in East and West.

Access to the membership in EDEN is promoted by discounted membership fee for institutions and free membership for individual applicants from Central and Eastern Europe. In the course of elections of the Executive Committee, it has always been considered to have an appropriate representation from CEE countries. When deciding on the venue of the EDEN conferences, a certain alteration between East and West has also been respected.

A Joint Task Force with the European Association of Distance Teaching Universities (EADTU) was established in 1994 and renewed in 1997, to provide a support structure for the channelling of expertise in connection with the development of distance education in CEE. The services of the Joint Task Force have been offered to and used by the Phare project on Multi-Country Co-operation in Distance Education, and an Expert pool booklet has been published, with information about EDEN /EADTU experts. An important output of the Joint Task Force was the elaboration of a study on the use of advanced technologies in Eastern-Central Europe in distance education

3 Policy studies and feasibility studies

EDEN representatives were invited, by ICDE, to coordinate two important policy studies commissioned by UNESCO - The Relationship between Distance and Mainstream Education, coordinated by Armando Rocha Trindade for the International Commission on Education for the Twenty-First Century (Delors Commission, UNESCO), and a Policy Paper on Open and Distance Learning, coordinated by Erling Ljosa.

A Feasibility Study for Distance Education in the Czech and Slovak Federate Republic, Hungary and Poland was elaborated for the European Union TEMPUS programme in 1992. Distance Education in Estonia, Latvia and Lithuania is the report of a feasibility study submitted to the Nordic Council of Ministers in 1993. It was prepared by a joint Baltic-Nordic team of experts, and was made possible through the collaboration between EDEN and the four Nordic associations for distance education.

In 1994, two feasibility studies for distance education in Bulgaria and Albania were funded by TEMPUS. Also in 1994, EDEN was invited by the Hungarian Ministry of Culture and Education to assist in a feasibility study on the Development of a Regional Distance Education Network in Central and Eastern Europe. The study was funded by the Phare programme and coordinated by the Hungarian Ministry of Education, with the European Association of Distance Teaching Universities (EADTU) as the contractor. Following the study, a grant was made by Phare for the development of the regional network and start the "Multi-Country Distance Education Programm'e" in the CEE countries. Further, the EDEN-EADTU Joint Task Force for Central and Eastern Europe produced in 1996 a study on the use of advanced technologies in Eastern-Central Europe in distance education.

Useful Links

Council of Europe <http://culture.coe.fr>

European Commission - DG XXII, Education, Training, Youth

<http://europa.eu.int/en/comm/dg22/dg22.html>

UNESCO Education Information Service <http://www.education.unesco.org>

European ODL Liaison Committee <http://www.odl-liaison.org>

Coimbra Group <http://www.coimbra-group.be>

ICDE (International Council for Distance Education) <http://www.icde.org>

EuroPACE <http://www.europace.be/>

EADL (European Association for Distance Learning) <http://www.eadl.org>

EADTU (European Association of Distance Teaching Universities) <http://www.eadtu.nl/>

EFECOT (European Federation for the Education of the Children of the Occupational Travellers)

<http://www.efecot.net>

E.F.ODL (European Federation for Open and Distance Learning) <http://www.ef-odl.org>

EUCEN (European Universities Continuing Education Network) <http://www.eucen.org>

SEFI (European Society for Engineering Education) <http://www.ntb.ch/SEFI/>

CADE (Canadian Association for Distance Education) <http://www.cade-aced.ca>

GADE (German Association for Distance Education) <http://www.ag-fernstudium.de/>

CRE (Association of European Universities) <http://www.unige.ch/cre>

European Journal of Open and Distance Learning <http://www1.nks.no/eurodl/eurodlen/index.html>

7. Budapest University of Technology and Economics Distance Education Centre

<http://www.bme.hu/> <http://www.bme-tk.bme.hu/>

H-1111 Budapest, Egry J.u.l. Hungary

Budapest University of Technology and Economics

The goal of the Budapest University of Technology and Economics (BUTE) is to graduate professionals who are capable of high-level creative technical work, who can organise and supervise production and infrastructure, and who are qualified to perform scientific research, participate in technical development, solve technical problems, and implement solutions. In addition to educating engineers and economists, the university provides continuing education through:

- graduate programs in engineering and economics specialisations including those for the managers of technical plants and businesses,
- refresher courses to inform practising professionals about new scientific developments which affect their work, and
- doctoral programs and guidance and instruction for scientific research fellows.

BUTE is justly proud of its more than two hundred-year tradition of excellence in engineering education. It has developed into the largest institution of higher education in Hungary and is one of Central Europe's most important research centres. The university considers scientific research and development of equal importance not only to its educational activities, but also to economic and social development.

Today, more than 110 departments and institutes operate within the structure of seven faculties:

- Architecture
- Chemical Engineering
- Civil Engineering
- Electrical Engineering and Informatics
- Mechanical Engineering
- Natural and Social Sciences
- Transportation Engineering

About 1,700 lecturers, 700 researchers and other diploma holders, and numerous invited lecturers and practical specialists, participate in education and research at BUTE.

Approximately 10% of the University's 12,000 students are from 40 countries abroad. BUTE issues about 70% of Hungary's engineering diplomas.

International network

BUTE and its staff are keenly interested in maintaining and strengthening existing international relationships as well as forging new ones. BUTE has entered into agreements of cooperation with about 80 universities, mainly in Europe and in the US, but all other regions of the world are involved, too. Some of these cooperative ventures are research oriented while others involve the exchange of faculty students. BUTE is a member of the International Student Exchange Program (ISEP), which arranges for Hungarian students to study at American universities and for students from different US universities to study at BUTE.

The TEMPUS Program of the European Union has been playing an important role in strengthening and in building up relationships through the Joint European Projects. Being the first among the Central and Eastern European countries, Hungary has joined the SOCRATES program since 1997. In the frame of this program BUTE applied for student exchange and teacher staff mobility.

BUTE is also a member of many international organisations, including the CRE (Standing Conference of Rectors of the European Universities), IAU (International Association of Universities), SEFI (European Society for Engineering Education), CESAER (Conference of European Schools for Advanced Engineering Education and Research), etc. The Hungarian National Committee for FEANI, the European Association of National Engineering

The screenshot shows the homepage of the Budapest University of Technology and Economics. The header includes the university's name and a navigation menu with links for search, e-mail, phone, PR office, and webmaster. The main content area features a welcome message and a list of organizational units, including faculties, departments, and research activities. A sidebar on the left provides contact information for the university, including its address, P.O. Box, and phone/fax numbers. The footer contains a copyright notice for the year 2000.

Budapest University of Technology and Economics

search • e-mail • phone • PR office • webmaster

Welcome to the
Budapest University of Technology and Economics!

organizational units
Faculties, departments, central supporting and other organizational units, and their homepages

education and research
Educational and research activities

foreign language education
International Education Center (BUTE IEC)

university press
The "J * * Műn * e", faculty newspapers, Publishing Company of BUTE

other information
Other useful information, conferences, events

Address of BUTE:
Művelődés krt. 9-13
H-1111 Budapest
Hungary

P.O. Box:
Budapest, P.O. 81
H-1621 Hungary

Main Phone:
+36 1 462 1111

Main Fax:
+36 1 462 1110

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Organisations, is also placed at BUTE. Many professors of BUTE hold leading positions in these international professional organisations.

Distance Education Centre

BUTE established its Distance Education Centre at the end of 1997. The center employs 17 full-time staff and a dozen part-time personnel. Professors of BUTE, its graduate students, and teachers from secondary school also join the team as course tutors.

The centre's principal aims are:

- to facilitate the introduction of new technology into education at BUTE and other conventional universities in the country;
- to deliver high quality, job market-oriented courses and in-service training, continuing education in order to meet the needs of the market;
- to promote the concept of lifelong education and education for all;
- to promote international collaboration through such programmes as Phare MultiCountry and Leonard da Vinci.

The centre is equipped with the following resources:

- two video-conferencing systems (one PictureTel and one PC-based);
- 35 PCs, 30 of which are multimedia PCs linked by optical fibre to the optical fibre ring providing large bandwidth, connecting the Budapest universities with each other and with the outside world;

**MŰEGYETEMI
TÁVKÖZPONT**

1111 Budapest, Egry József utca 1.
Telefon: (+36)-1-463-3866, 463-3867 Fax: (+36)-1-463-2561
E-mail: info@bme-ik.bme.hu

Képzéseink Internettel támogatott képzéseink Szolgáltatásaink Nyitott oldal A központ Kapcsolataink
Fejlesztési programjaink A nyitott és távközpontokról Technikai adatok

Utolsó módosítás: 2000.10.24.

- interpreting centre;
- multimedia development and application room, ICT development room, and library.

The centre has developed approximately thirty courses in five areas:

Distance Education:

- Training of course support
- Tutor training for distance education.

Informatics:

- Basics of informatic tools
- Internet basics
- Informatician in various academics
- Web informatics in various academics
- Elaboration of multimedia course support.

Management Education:

- Environmental protection
- Project management
- Human resources management
- Contemporary administration
- Enterprise economy and administration
- ABC of marketing
- Commercial operation and communication
- Marketing strategies
- Communication technique
- Introductory commerce
- Leadership in marketing and publicity
- Assistance in marketing and publicity
- Commercial leadership
- Secretaryship.

Languages:

- Training of international translators and interpreters
- Business English
- Language courses at the STUDIA language centre.

Other:

- Fundamental fluid mechanism
- Introductory psychology for high school students

Standard duration of training is three months. These courses are modeled after vocational training in the UK, which is quite practical and interactive. These are not aimed at degree conferment as yet. To promote multimedia use in teaching practice, a new on-campus Faculty Development is about to begin at the centre's computer room, which is also used for IT training for company employees.

8. Virtual University Education Program

<http://www.mdsg.umd.edu/~jacobs/virtue/index.html>

University of Bergen, Postboks 7800, N-5020 Bergen, Norway

The Virtual University Education Program (VIRTUE) is a collaborative virtual university-based education and research program initiated by the University System of Maryland (USM); Goteborg University (GU), Sweden; and the University of Bergen (UoB), Norway. This triangle of universities demonstrates the potential of the information highway for providing international education. With the support of \$5.3 million worth of grant from Sweden's Kunt and Alice Wallenberg Foundation, the three organizations have formed a partnership that fosters collaborative research, offers jointly developed and delivered courses, and provides public outreach to local schools and industry.

The program, begun in August 1997, addresses pressing global environment problems and sustainable development issues in the areas of food availability through aquaculture, water quality, and interactions between human health and the marine environments.

VIRTUE fills a unique niche in collaborative international education by folding the best faculty, research, and resources of those universities into a joint international program previously not available to students. It is a first step toward developing an integrated international networked society.

Its objectives are:

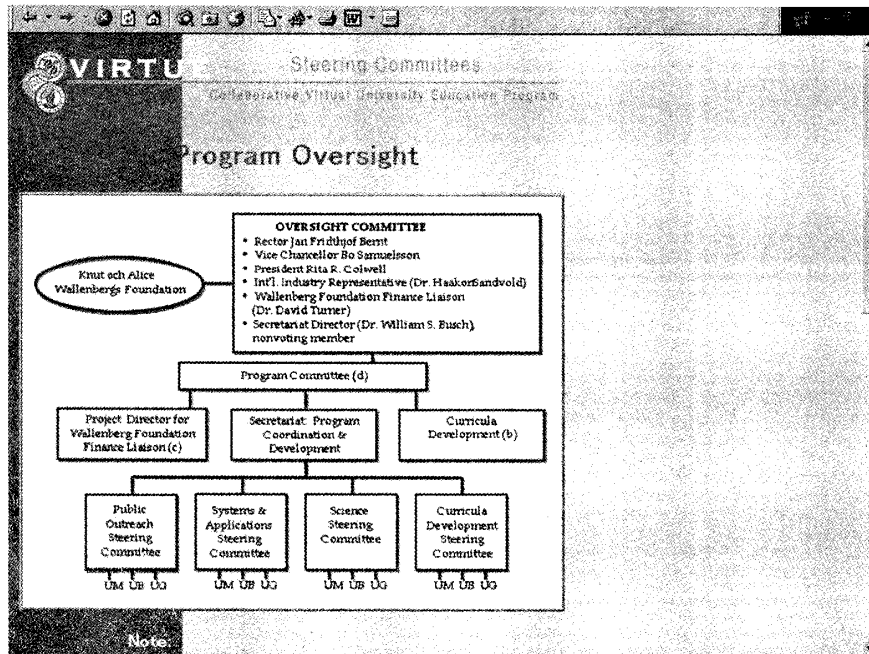
1. Enhance its domestic and international education capabilities via life-long learning, public outreach, innovative communication technology, and international degree programs as well as establish an international virtual university with open and strong partnerships between academia, industry, and government organizations.
2. Develop innovative solutions for global environmental and sustainability issues through use of marine science and biotechnology research related to their respective coastal and oceanic areas.

By using and further enhancing the strong Swedish research base and distance learning capabilities at Goteborg University and their involvement in coastal issues, a four-year, integrated, and multidisciplinary international research program is being established. It will develop new education opportunities involving staff, faculties, students, and facilities of the three universities and conduct important collaborative marine scientific research.

The ultimate goal is to prepare a foundation for an international virtual university. This will require an overall program perspective that identifies existing and future technologies, and addresses real world operational needs. This program provides the opportunity for a meaningful pilot project using the triangle of these three universities to demonstrate the potential of using the information highway for international education.

A program secretariat has been established at the University of Maryland to coordinate the international project. It interacts very closely with Scandinavian counterparts at Goteborg University and the University of Bergen, who provide the respective focal points for each country. In addition, close interactions have been explored with appropriate United States and Scandinavian industries, as well as government organizations.

The organizational scheme of the VIRTUE is shown below:



Educational programs

Several seminar series have been given for credit. In addition, special lectures addressing specific topics in marine science as well as "short courses" were designed. These programs were delivered by way of real-time video-conferencing in concert with Internet capabilities.

Applications include;

- Specific lectures
- Seminar series

- Short courses (2 or 3 lectures)
- Tutorial courses (1 to 2 weeks)
- Accredited courses and laboratories
- Monitoring field work and gathering data
- Researcher to researcher discussions
- Program management meeting

These distance learning courses have witnessed that their learners achieve the educational goal equally or even better compared with on-campus students. This phenomenon does not show easily. To support learning, it takes personal attention and group collaboration with clear expectations of their activities. In fact, each course consists of a number of lectures from different institutes, so the VIRTUE program prepares one designated tutor at each site.

Delivery system has been more shifted to the Internet, rather than video-conferencing because of its technical and economical merits. Platform choice has been Lotus LearningSpace, but more efficient platforms, both financially and pedagogically, are being searched today. WebCT and LUVIT are among prospective candidates. Today, three new courses (international aquaculture, microbiocology and bioinformatics), have been offered totally online with such communication tools as BBS and chat space.

Almost all of the materials come out of the Program Office/Secretariat of VIRTUE at the University of Maryland. The funds allotted for establishing and operating this office which oversees and coordinates all aspects of the program is \$220,000 per year. Since this office is located at the University of Maryland Biotechnology Institute, a number of the physical services such as space, office facilities, and resources are provided by UMBI as an "in-kind" donation.

Current status as an attempt of virtual university, however, is rather limited. Collaborative course production in the graduate level education has been well achieved. Credit exchange and degree conferment are still far in vision due to international diversity among the three institutions.

One thing worth noting about the VIRTUE is its connection with K-12 education. It has given special attention to hands-on educational opportunities for school pupils, thus being able to compile a huge amount of informal data concerning marine biology, and also to promote interest in this science among the next generation.

Useful Links

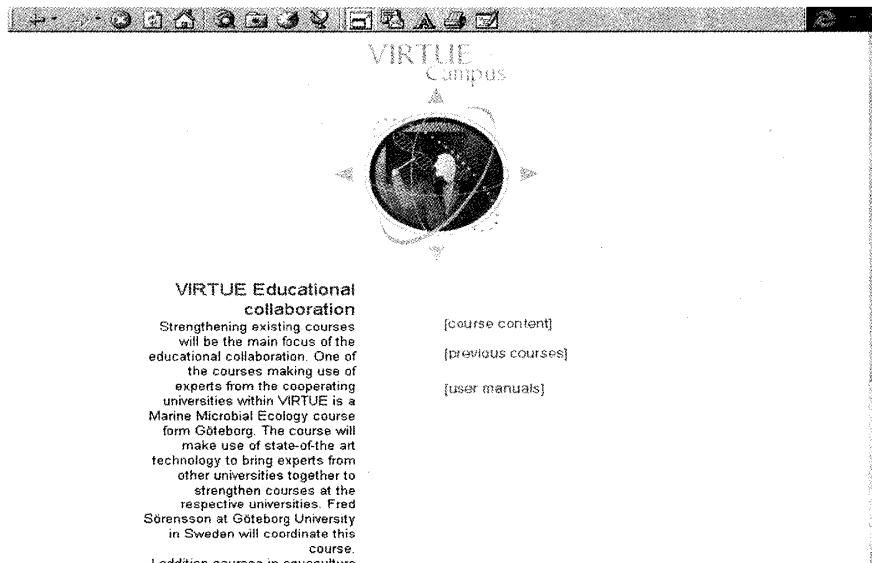
The school project <http://uml.uib.no/virtue/schools/>

VIRTUE Newsletter <http://uml.uib.no/virtue/newsletter/>

main home page of the project <http://www.umbi.umd.edu/virtue/>

Web site for courses support, based on Lotus Learning Space

<http://www.uib.no/ums/virtue/campus/index.html>



9. Lund University Center for Information Technology in Education

<http://www.lu.se/> <http://www.citu.lu.se/>

Box 117, 221 00 Lund, Sweden

Lund University is one of Sweden's largest and most comprehensive universities. Today it has about 34,500 undergraduates and 3,300 postgraduates. Students can choose from among some 50 educational programs and over 800 separate courses.

The University has about 6,500 employees. Two-thirds of them are teachers and researchers, while the rest are technical and administrative personnel. There are about 350 professors in roughly the same number of departments and divisions. The number of professors will now rise as a result of the promotion reform which took effect in 1999.

The annual budget for the University operations - tuition, research, equipment, libraries, and service - is around SEK 4 billion.

The University is divided into faculties, each with a considerable degree of autonomy. There is a board with overall responsibility for each faculty. The faculties are:

- Technology (Lund Institute of Technology, LTH)
- Science
- Law
- Social Sciences (including the School of Economics and Management)
- Medicine
- Liberal Arts
- Theology
- Performing Arts (the Academies of Music, Art, and Theatre)

There are also various centers that cross faculty and departmental boundaries. These include:

- International Institute for Industrial Environmental Economics
- Center for Women's Studies
- Max-laboratory
- Food Center
- Center for European Studies
- Center for East and Southeast Asian Studies



CITU

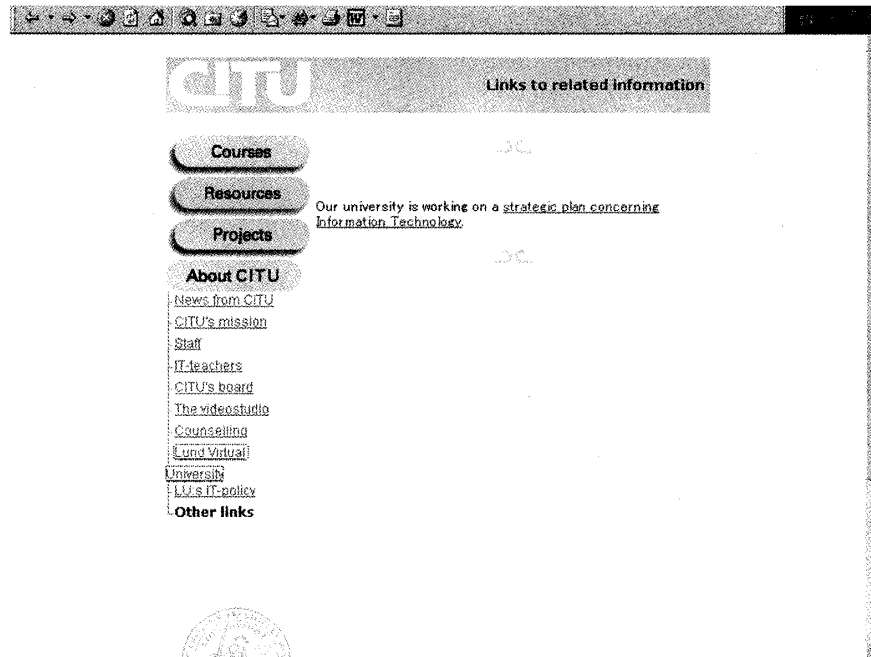
CITU (Center for Information Technology in Education) is a unit directly reporting to the Vice Chancellor of Lund University. Its task is to:

- support and stimulate teachers, departments and staff at Lund University to use IT in education and learning;
- support students to develop their computer skills;
- keep up with news about the national and international development of IT in the educational world, and;
- work towards the university having a high competence and level of ambition about using IT in education, and to suggest measures suited for increasing the quality in this matter.

Today, 4,000 students of Lund are enrolled in dedicated IT programs, 14,000 students are in IT related programs and 92% of all entering students have computers. On average, Internet connection is achieved by 70-80% of all households in the country, partly thanks to tax exemption in purchasing computers and free-of-charge Internet connection. Students are well prepared to participate in online course, while many teachers as yet need necessary skills in developing Web materials.

CITU demonstrates how information technology can be used in education, and supports the practical and pedagogical use of IT at Lund University. CITU is now becoming the central coordinator for facilitating ICT use and active learning for the whole university community. UPC, a conventional Center for Teaching and Learning, and NetLab, the catalogue-developing

Lund University Net Lab, are both soon to be integrated into CITU.



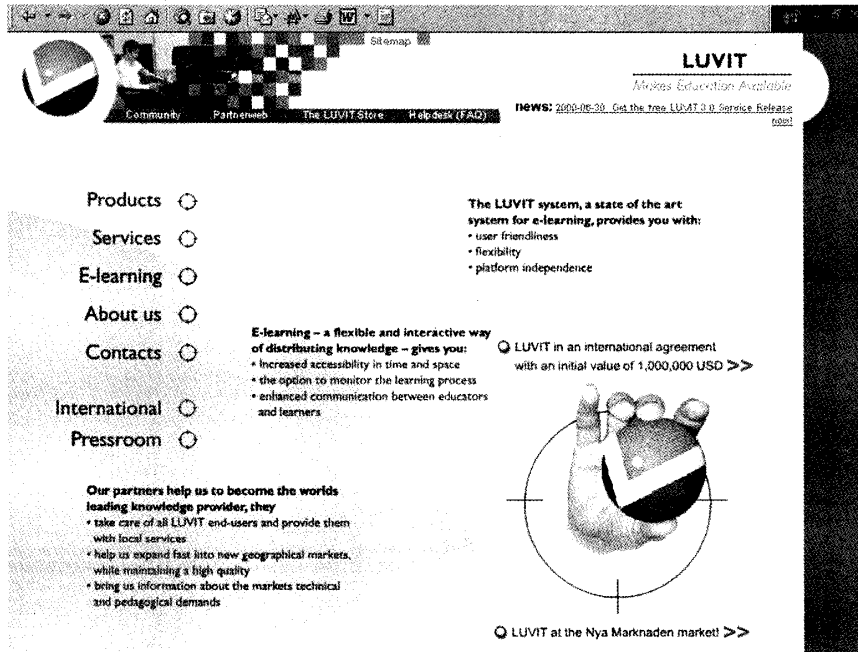
LUVIT school

CITU has been very much involved in the work with LUVIT - Lund University Virtual Interactive Tool. LUVIT is, together with EVA (for evaluation of other purposes) and ITCampus (an open forum for students and teachers at universities), is a comprehensive tool for distance course production, delivery, maintenance and participation, which is now on commercial market. CITU is responsible, along with UPC and the Office for Continuous and Distance Education, OCDE, for the implementation of LUVIT and the development of pedagogics in relation to LUVIT at Lund University.

CITU is responsible for the LUVIT user education - both for the Lund University teachers and external users. In this education the pedagogical aspects of net-based education as well as the LUVIT functions are integrated.

The LUVIT school includes:

- Hands-on training of the LUVIT functions
- Seminar meetings where issues on pedagogics and net-based learning are addressed
- Net-based education via LUVIT including examples on net-based courses, descriptions of LUVIT functions and how these can be used in net-based education.



LVU Lund Virtual University

CITU has been asked to build a university of the third millennium in cooperation with OCDE. CITU collaborates with Glasgow University and has hired Dave Whittington to contribute his experiences from building Clyde Virtual University. Since four years ago CITU has been building on a virtual student community in ITCampus. Currently, the task is to further these ideas to a new type of virtual university. This new venture tries to integrate satellite communication with Web-based distribution via LUVIT. The satellite solution is a cost effective way to reach students with a lot of information simultaneously. The bandwidth is high and guaranteed. Feedback to transmitted live lectures can be provided by the Internet and LUVIT. Lund Virtual University is still on the preparatory stage. Its delivery concept is observed from the following statement:

New roles for teachers - From being a sage on the stage to being a guide on the side

To get an idea of what the paradigm shift could mean to the teacher, we can look at the old time shoemaker. He produced individually hand-stitched shoes for the people close to him. When the first machine-made shoes appeared people said that they could not suit your foot and would be very uncomfortable. Today we all wear machine made shoes that usually fit well, they are much cheaper and we have many more shoes than our grandfathers ever did.

Today we talk about the impossibility of being taught by a machine and the importance of the teacher. The authors can see a future where we buy our tailor made education from future education factories. Let's compare

this with the car industry. When you buy a car today, you may even design your own car to be manufactured for you. We expect education to be better, cheaper and closer to our needs. The role of the teacher could change either to education shop assistant (like the car showroom assistant) or to education designer in a big education factory (like the car designer).

Today's courses will be modularized in smaller units that could be self-contained. When a lifelong learner looks for education on a subject, they can search and find two-hour units on the topic rather than semester courses. Teachers will advertise their modules to other teachers so that they can be parts of other courses. To increase interchange the modules will be specified according to standards. One way of achieving higher quality could be to ask teachers who today develop their own but similar courses to form teams and share the work differently. Each takes responsibility for a more narrow part and thus has more time to tie the course closer to modern research and educational methods, borrowing ideas e.g. from TV. To increase quality in media production and still stay within present costs, we suggest a redistribution of the teacher workload. Instead of having 20 teachers taking 3 hours to prepare a similar lecture they could spend 60 hours preparing different lectures that they share among themselves.

Organisation of tomorrow

In the next century the power and the decision over education will move from the producer (the teacher or university) to the consumer. For example, this shift of power to the consumer has already happened to the car industry and news media. Newspapers today have to write what the readers want to read or people will not buy the papers and those papers will go out of business. Imagine a future where the universities have to give courses that the students want if they are to stay in business!

A new metaphor might involve a student's desk. On the desk would be current work. There may be a calendar or timetable to one side with a list of the student's courses. From their desk the student can contact other students, messages can be left for friends, video links can be made at the touch of button. The student's videophone, answering service, and address book are built into their desktop. Tools such as ICQ suggest a way forward but these tools will have to be deeply embedded within the structure of the virtual university.

Today's education can be thought of as a model of a bus. The course starts according to a fixed timetable and arrives at predefined goals. In the future we will see more of a taxi model where the courses starts as soon as a group of students is ready and the course takes them where they want to go.

Developed Tools and Related Sites

Assessment Engine <http://cvu.strath.ac.uk/ae/>

Clyde Virtual University <http://cvu.strath.ac.uk/>

One of the first virtual universities, with Assessment Hall, Cafe, Lecture Hall, Library and Admin Office.

EVA <http://bengt2.citu.lu.se/eval/>

A Web-based evaluation tool for editing questions, publishing the evaluation and its results on the Web.

ITCampus <http://itcampus.org/>

An international virtual student campus with resources collected by students for students to develop the quality of education.

KNUT <http://knut.kks.se/>

Knowledge Network for Education in Schools.

LUVIT, Lund University Virtual Interactive Tool <http://www.luvit.com/>

A tool for teachers to create and publish courses on the Web, for students to learn and communicate, and to record student progress.

LVU, Lund Virtual University <http://ingmar.citu.lu.se/>

Preparatory site of LVU.

10. KTH Online

<http://www.online.kth.se/>

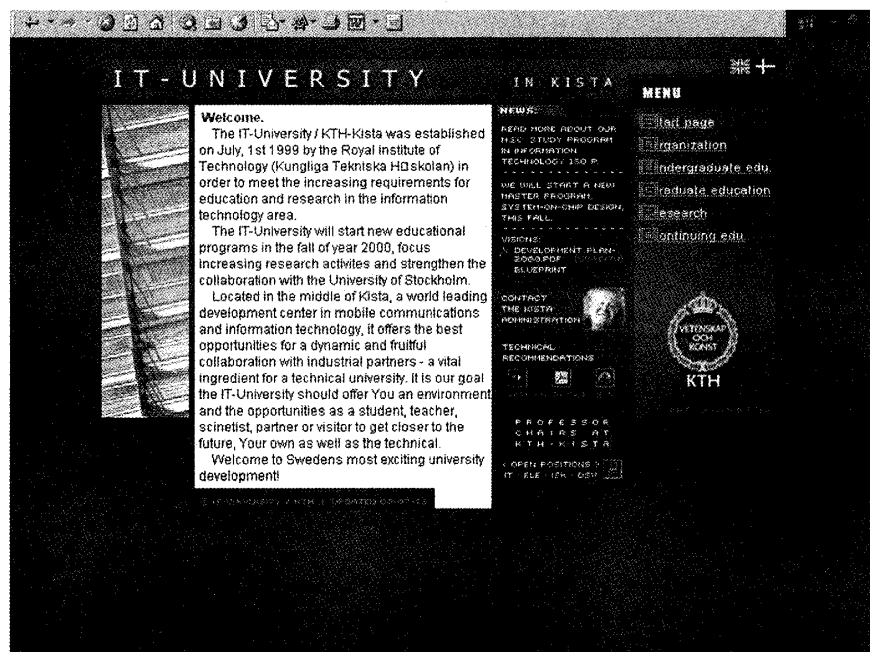
Electrum 204, 16440 Kista, Sweden

KTH IT-University

The IT-University / KTH-Kista was established on July, 1st 1999 by the Royal Institute of Technology (Kungliga Tekniska Hogskolan) in order to meet the increasing requirements for education and research in the information technology area. The IT-University will start new educational programs in the fall of the year 2000, with increased research activities and strengthened collaboration with the University of Stockholm. Located in the middle of Kista, a world leading development center in mobile communications and information technology, it offers the best opportunities for a dynamic and fruitful collaboration with industrial partners - a vital ingredient for a technical university.

The IT-University has the following departments:

- Department of Teleinformatics
- Department of Electronics
- College of Engineering at Kista
- Department of Computer and Systems Science



KTH Online

The KTH Online is a section of continuing education in the Department of Teleinformatics, IT-University. It attracts highly professional participants from a wide range of companies in IT, communication, electronics, and other related fields. By sharing experiences with people from different companies, the participants increase their own knowledge, get new ideas and deepen understanding of the subject. They also create a valuable network that they might find useful in the future.

During the course activities, participants keep in close contact with one of the course leaders. Their task is to help the participants and answer their questions. They can help with everything from technical problems to questions about examinations. Participants can always get in touch with the course leaders through e-mail or phone.

Participants decide if they want academic credits or a diploma at the end of the course. The diploma course gives them a greater freedom to adapt the studies to their own field of interest. If they need academic credits they have to fulfill the general requirements. The course material is always the same whether they take the course for academic credits or not.

Corporeal meeting is an important cornerstone in learning but such an occasion should be optional since the course allows learning totally on line. Some of the courses have obligatory moments as an exam and/ or computer laboratory work if participants want to receive academic credits. If they do not have the possibility to attend, they can always take the course as a diploma course.

The course starts with a meeting at the Department of Teleinformatics in Kista. Participants, the professor and the course leader get to know each other over refreshments. The course leader demonstrates its Web site, accompanied by the professor's lecture. If the professor is not available in town, a video-conference system is at work, which has a permanent connection with Stanford University in Silicon Valley.

Discussion on line is an essential part of the course. To achieve a fully committed involvement, every participant is supposed to write a short self-presentation at the beginning of the course, which then gets a quick response on the Web, from the members of the learning community; that is, the professor, other participants and the course leader. This is also the case when assignments are posted on the Web.

Some of the courses have computer laboratory work where participants get practical

experience in one of well-equipped computer labs. If academic credits are needed, the course contains one exam and/ or assignments.

At the end of the course there is another meeting occasion in Kista for a summary and final discussion.

In this kind of learning opportunity, both kick-off meeting and summary session are quite important. In addition, class should consist of minimum 15 participants, preferably from different companies. Online discussion and peer feedback on assignments should also be moderated with adequate consideration so that less active members are to be fully supported for participation.

Course development

Currently, 10 courses are provided as follows. In several years, the KTH Online plans to prepare more than 500 courses using all faculty resource of KTH. These materials are also used for on-campus students to reduce the teaching responsibilities of professors.

- Datorkommunikation och datornat
- Internetworking
- Internetworking diploma
- Convergence
- Multicast
- Java Network Programming
- High-Speed Networks
- Quality of service
- Regional Advantage Seminars
- Traffic Analysis & Measurement

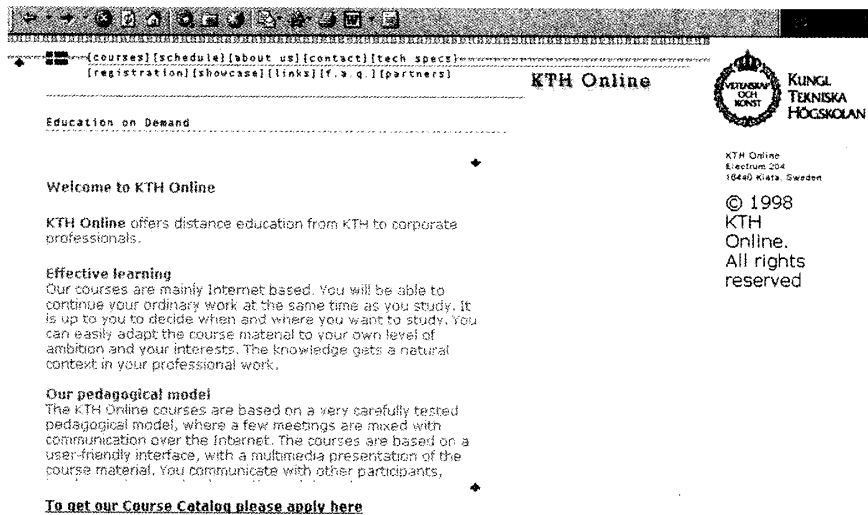
Course duration is normally 8 weeks and average study hours are more or less 1 hour per day. Tuition is covered by companies, not employees, and the average course fee is between 10,000-20,000 SEK.

Each course is produced by a team of responsible specialist. More specifically, ordinary makeup of the team includes:

- 2-3 course producers
- 2-3 course leaders
- 1 system developer

- 1 video producer
- 1 photographer
- 1 evaluation expert
- 1 Webmaster
- TAs (optional)

One major problem would be professor's lack of enthusiasm toward online teaching. Due to shortage of faculty staff, teaching roles tend to become a heavy burden for professors. Online teaching should offer an incentive and reward system for their contribution. For now, licensure of course materials forms a part of the reward. Another task to face is economic in nature. Before the attainment of scale merit, the turnover continues to be in the red, thereby making it hard to keep on investment for the project.



Navigation: [courses] [schedule] [about us] [contact] [tech specs] [registration] [showcases] [links] [f. a. q.] [partners]

KTH Online

Education on Demand

Welcome to KTH Online

KTH Online offers distance education from KTH to corporate professionals.

Effective learning
Our courses are mainly Internet based. You will be able to continue your ordinary work at the same time as you study. It is up to you to decide when and where you want to study. You can easily adapt the course material to your own level of ambition and your interests. The knowledge gets a natural context in your professional work.

Our pedagogical model
The KTH Online courses are based on a very carefully tested pedagogical model, where a few meetings are mixed with communication over the Internet. The courses are based on a user-friendly interface, with a multimedia presentation of the course material. You communicate with other participants.

To get our Course Catalog please apply here

KTH Online
Electrum 204
10440 Kista, Sweden
© 1998
KTH
Online.
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11. Helsinki University of Technology Lifelong Learning Institute Dipoli

<http://www.hut.fi/> <http://www.dipoli.hut.fi/>

P.O. Box 8000, FIN-02015 HUT Finland

Helsinki University of Technology

In technological and scientific research, Helsinki University of Technology plays a significant national role; one reason for this is that in many fields of technology Helsinki University of Technology is the only place in Finland where university level teaching and research are carried out.

There are about one hundred laboratories in twelve departments at HUT and four separate research institutes. Spanning the administrative division are eleven institutes, whose task is to draw together the disparate research resources of the various units.

Basic characteristics are:

- Founded in 1849, received university status in 1908
- Twelve faculties
- Nine separate institutes
- 14 degree programs:

Automation and Systems Technology

Information Networks

Engineering Physics

Computer Science and Engineering

Industrial Engineering and management

Electrical and Communications Engineering

Mechanical Engineering

Chemical Technology

Materials Science and Rock Engineering

Forest Products Technology

Architecture

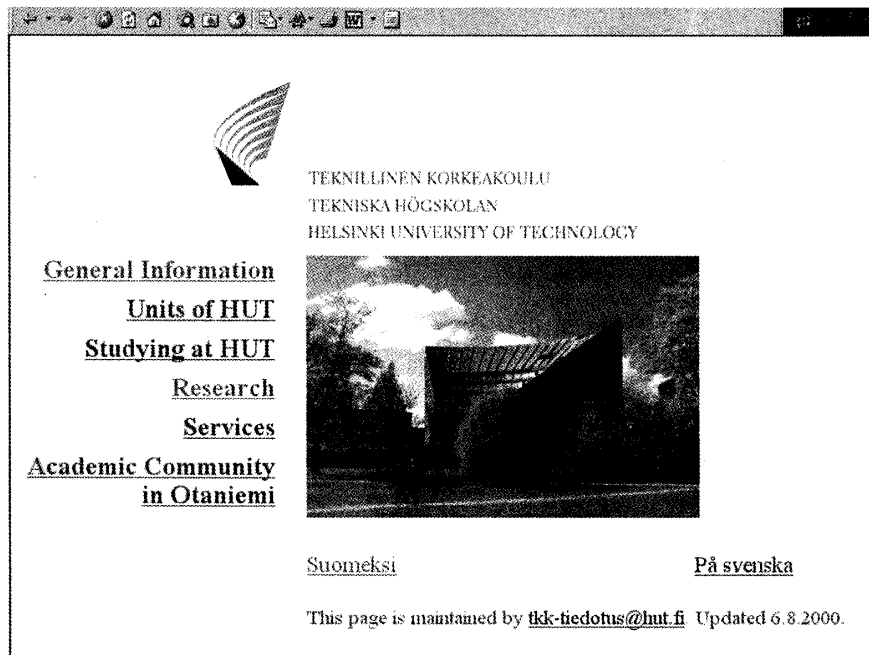
Landscape Architecture

Surveying

Civil and Environmental Engineering

- 226 professors
- 13,572 under- and postgraduate students
- 1,198 degrees awarded 1999

- Total funding from state and other sources FIM 970 million marks (1999)



Lifelong Learning Institute Dipoli

The Lifelong Learning Institute Dipoli of Helsinki University of Technology organizes courses and professional development programs in fields within the expertise of the university. The institute combines a good international network, the solid technological know-how of the university staff, and the business experience from industry to support management technological development. HUT Dipoli is one of the largest providers of continuing education in the field of technology in Europe. Staff numbers around 100 including personnel of its conference center.

The institute has close contacts with companies and business organizations. To identify the present situation and development needs, it continuously develops new methods, for example, to analyze training needs or simulate business operations. Continuous research and development work enables the center to offer the highest level of continuing education in this field in the country.

The institute uses the latest learning technologies such as video-conferencing and Web-based learning environments. Since 1989, Dipoli has depended on simple video-conferencing and face to face interaction, but from 1994, delivery method has included the Internet to actualize more flexible, tailored environment. For now, Web communication is used as a

supplement for video-conferencing and classroom instruction. The institute also collaborates with the Finnish Broadcasting Company to produce and broadcast open university courses.

The main tasks of the institute are:

- to organize courses, usually several weeks in duration, to broaden or to deepen professional skills;
- to develop teaching of the latest technology, especially in areas of the university's research and, by various methods, to pass on the expertise to companies and others who need it;
- to increase the opportunities to make use of the under- and postgraduate teaching of the university also in the form of continuing education for those at work and as open university teaching; and
- to organize research and development work to support continuing education.

Statistics from the year 1999 shows that approximately 6,000 students took about 200 programs for 3,600 student days. Many of the students are graduates from HUT, the duration of programs spans from two days to 4-6 years to complete. HUT departments (chemistry, electronics construction etc) provide field and content-specific professional development programs in order to update, extend, deepen, and qualify present skills of the students.

Examples of continuing education are technology management, security management, environmental training and quality training. Personal and organizational development programs include human resources development services and various tailored, customer-oriented training and development programs.

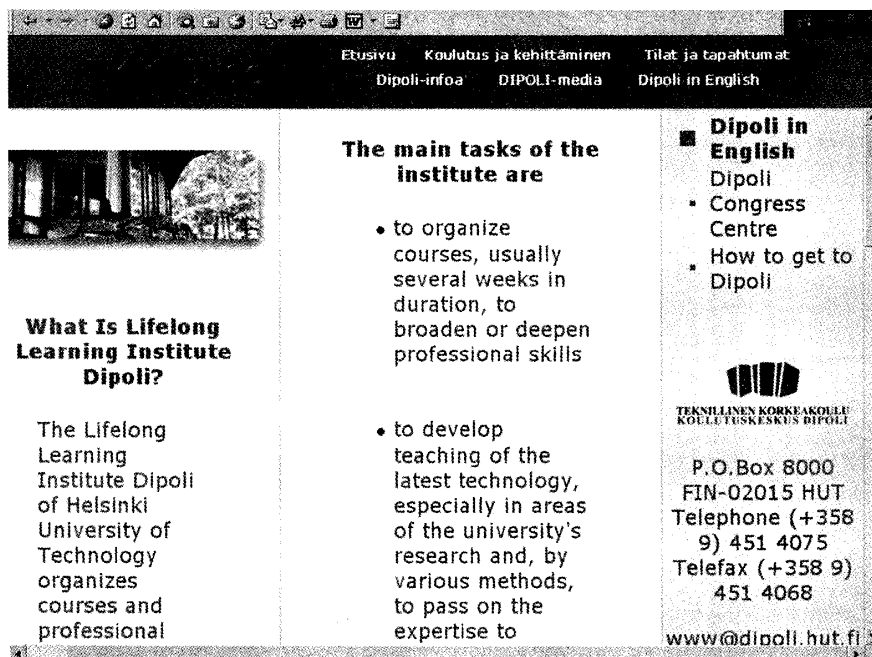
Global networking is an essential part of the activities of Lifelong Learning Institute Dipoli. HUT Dipoli hosts the headquarters of International Association of Continuing Education (IACEE). It is a founding member of European Lifelong Learning Initiative (ELLI) and EuroPACE 2000. It is also a member of the EuroStudyCentre network of European Association of Distance Teaching Universities (EADTU) and partnering training organization in the United Nations Staff College Project.

At the moment HUT Dipoli is a coordinator or a partner in about 30 European R&D and Training projects, including EU programs such as Telematics for Education, ESPRIT, TEN-EuroISDN, LEONARDO, SOCRATES, TEMPUS, ADAPT and EMPLOYMENT. Together these projects involve over 300 networked organizations. The management of these national and international projects is one of the responsibilities of the Network & Development (N&D) Services department of HUT Dipoli via "home bases" such as: HUT Channel, SoFine, TechNet Finland and EuroPro.


The core competence of N&D Services is developing user-specific, telematically supported learning environments. These tailored environments combine world-class content, a wide variety of different media and learning support processes. The environments can be utilized in the development of basic or continuing education both in universities and companies. The four main telematic learning service concepts offered by N&D Services of HUT Dipoli to its customers are:

- Telematically Supported Learning Center
- Distributed Classroom Service
- Networked Telelearning Service
- Collaborative Learning and Working Environment

Lifelong Learning Institute Dipoli is also the foundational base of the Finnish Virtual University. This university is a consortium of 19 existing universities (all universities of the nation but one), as well as a number of polytechnics, business enterprises and research institutes. This new educational venture is to start operating in 2004. Matti Sinko who organized the implementation plan for this national initiative has just moved from the Ministry of Education to HUT as director of the development unit of FVU.



Etusivu Koulutus ja kehittäminen Tilat ja tapahtumat
Dipoli-infoa DIPOLI-media Dipoli in English



What Is Lifelong Learning Institute Dipoli?


The Lifelong Learning Institute Dipoli of Helsinki University of Technology organizes courses and professional

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- to develop teaching of the latest technology, especially in areas of the university's research and, by various methods, to pass on the expertise to

Dipoli in English

- Dipoli
- Congress Centre
- How to get to Dipoli


TEKNILLINEN KORKEAKOULU
KOULUTUSKESKUS DIPOLI

P.O.Box 8000
FIN-02015 HUT
Telephone (+358 9) 451 4075
Telefax (+358 9) 451 4068
www@dipoli.hut.fi

Useful Links

TeleMac project at Dipoli <http://www.dipoli.hut.fi/ODL-WS-Valencia/index.html>

An overview of an SME development.

Cern Web University <http://cern.web.cern.ch/>

A Web-based university specializing in nuclear research.

EuroPACE <http://www.europace.be/>

Technology programs via satellite and ISDN.

Finnish Virtual University <http://www.minedu.fi/minedu/publications/online.html>

Report of a national strategies for 2000-2004 and its implementation plan.

PROMETEUS <http://prometeus.org/>

PROMoting Multimedia access to Educational and Training in European Society

SAVIE <http://www.savie.com/>

Support Action to facilitate the use of Videoconferencing in Education

12. University of Helsinki Educational Technology Center for ICT

<http://ok.helsinki.fi/> <http://www.helsinki.fi/>

P.O. Box 33 (Yliopistonkatu 4), FIN-00014 Finland

University of Helsinki

The University of Helsinki is the oldest, largest, and most versatile university in Finland. It was founded in Turku, the former capital of Finland in 1640. In 1827 the University was transferred to Helsinki, where it opened the following year. It was the only university in Finland until 1919.

The University is bilingual, the languages of instruction being Finnish and Swedish. Swedish speakers comprise 7% of the students, and Swedish is the statutory teaching language for 27 chairs. A growing number of seminars and lectures are offered in English on a regular basis and it is usually possible to complete courses through independent study when no instruction in English is available. Language does not tend to be a problem in examinations, as many departments accept tests written in English. Students can also make arrangements to write a research paper or essay in place of a written exam, but this varies according to field of study.

The University of Helsinki has nine faculties:

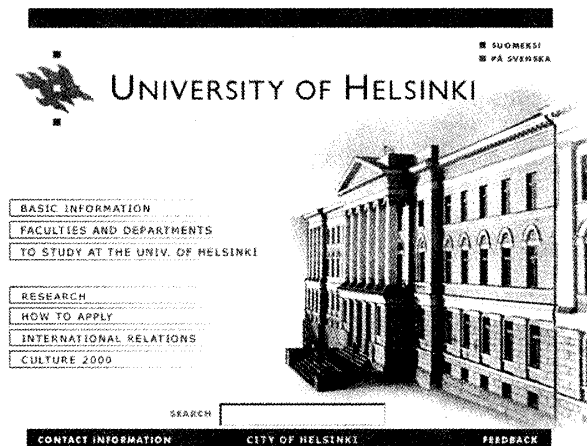
- Theology
- Law
- Medicine
- Arts
- Science
- Education
- Social Sciences
- Agriculture and Forestry
- Veterinary Medicine

There are four main campus areas. The division according to field is very general, the University has altogether sixty different locations in the city. The University also maintains nine units and training centers in other parts of the country, some as far north as Lapland.

Basic numbers in the year 1998:

- 34,252 students (62% women)

- 1,470 foreign students
- 2,930 teachers and researchers
- 2,100 docents
- 3,726 other staff
- 3,888 degrees granted
- 314 dissertations approved



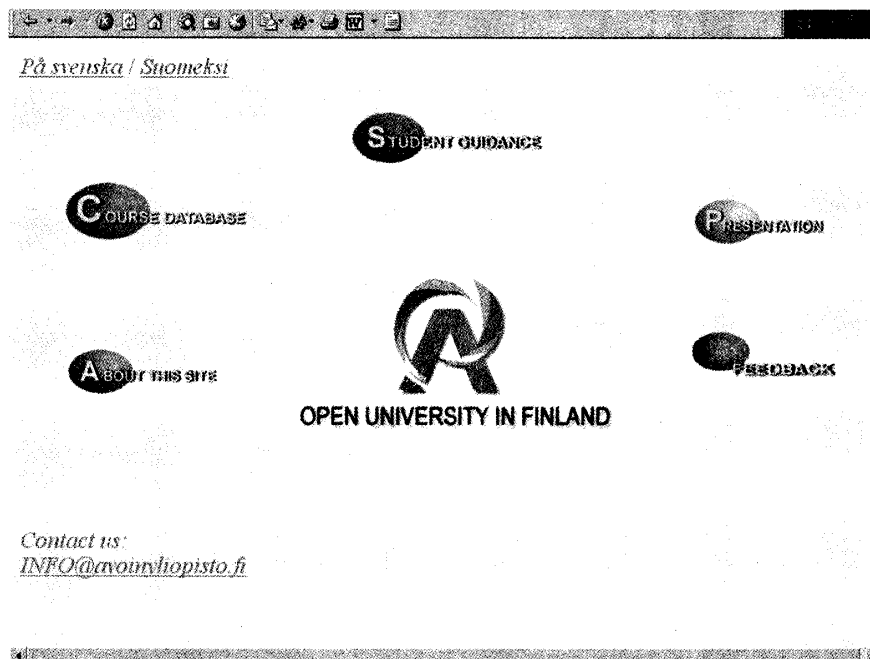
Adult education

The University of Helsinki Center for Continuing Education is the largest organization providing adult education in Finland. Through the different forms of adult education, i.e. continuing education, employment training and the Open University, the Center communicates academic know-how and research results to the public at large. It runs a network of independently administered specialized institutes across the country.

In 1998, the centers for continuing education arranged 1,585 courses with 39,214 students; 6,000 of the students took part in employment training.

The Open University provides tuition in most of the fields taught at the University of Helsinki. During 1998, about 21,120 students took courses at the Open University, the largest enrolment of 19 open universities in Finland. In addition to providing contact teaching, it has concluded agreements with 12 summer universities and 90 other educational institutions for distance teaching programs which allow people in 70 locations around Finland to pursue

studies in accordance with the degree requirements of the University of Helsinki.



Palmenia Center for Research and Continuing Education

Palmenia Center for Research and Continuing Education provides academic education for adults and implements research and development projects. Its aim is to support the development of individuals, communities and trade. It operates at the regional, national and international levels.

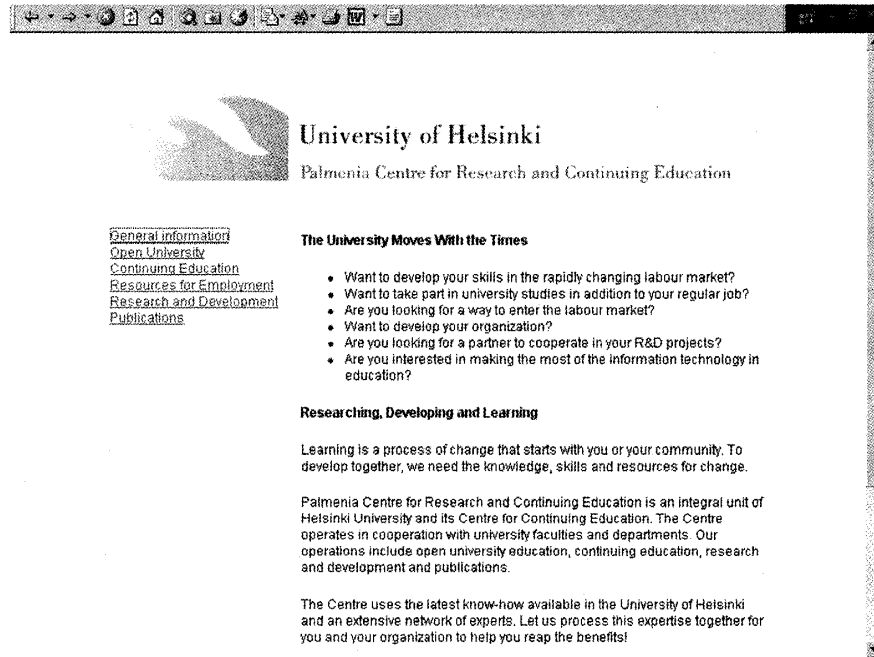
This center is an integral unit of Helsinki University and its Center for Continuing Education. The center operates in cooperation with university faculties and departments.

Palmenia Center for Research and Continuing Education is a networked organization consisting of experts from the University of Helsinki and cooperating with other Finnish institutes of higher education and universities in other countries. The center operates in cooperation with business enterprises, adult education centers, organizations, municipalities and state offices.

The center was founded in 1980 and since then has received financial support from the City of Lahti. Its permanent premises are located in Lahti, Helsinki and Imatra. Approximately 30,000 people take part annually in education arranged by the center. The annual budget is approximately USD 18 million.

Its operations include:

- Open University Education
- Continuing Education
- Research and Development
- Publications



Apaja Center

Apaja Center is a career development and learning center at University of Helsinki. Apaja's services are targeted to university graduates of all ages who are seeking employment in Finland and who are unemployed, underemployed or face the threat of unemployment.

Apaja Center seeks to provide an open learning environment, where job seekers can design and implement individualized self-development and employment plans. These plans may include individual or group counseling or tutoring, education or workshops provided by Apaja or other organizations and internships or work study with prospective employers.

Apaja maintains information about the labor market, job seeking, self-employment, continuing education, student grants, and international work and study opportunities. Apaja's customers may evaluate their professional situation and plan their career either independently or by consulting a career counselor. Counseling is also offered for job search and self-employment issues. On Apaja's continuing education courses job seekers can improve their professional competence or brush up their general working skills.

Apaja's services are available through the Internet and at Vuorikatu, Helsinki (Finland). Apaja is funded by the Ministry of Education, and all services are free of charge.

Media Education Center, Department of Teacher Education

The general aim of the Media Education Center of the Department of Teacher Education, is to conduct research and developmental work on media education. In addition, the Media Education Center aims at organizing degree courses and other initial teacher education courses in media education:

- organizing in-service teacher education courses in media education
- coordinating and taking part in national and international projects connected to media education
- contributing to international consultancy operations
- disseminating information and knowledge with respect to rapidly evolving media education systems

To sum, the Center specializes in different kinds of activities connected to media education, such as:

- MICT (modern information and communication technologies)
- ODL (open and distance learning)
- CMHCS (computer-mediated human communications systems)
- The Virtual School concept and virtual learning environments

The Center organizes teacher education programs for class and subject teachers as well as for adult educators. Some of the courses are open to all students at the University of Helsinki. Different modes of flexi-mode teaching, distance education and ODL are used, such as video-conferencing, e-mail, computer conferencing and mailing lists, and the pedagogical use of the World Wide Web, together with intensive face-to-face periods.

For all students in the Department of Teacher Education, the Center offers an opportunity to do part of their teaching practice (about 2 credits) in distance teaching. The Center also organizes in-service teacher education courses that focus on educational applications of modern information and communication technologies and on the concepts of an information and communication society, for instance:

- The Concept of Media Education and its Links to Other Domains of Knowledge and Science
- Pedagogical Uses of Information and Communication Technologies

- Network-Based Learning Materials: Assessment, Use and Production
- Interactive Distance Education and Open Learning Environments
- Media Education and Foreign Language Education
- Dialogic and Cross-Cultural Communication
- Knowledge Strategies As Empowering Mediators at the Institutional Level
- Integrated Distributed Learning Environments (groupware)
- Mobile Telecommunications
- Pedagogical Networking

The Media Education Center has cooperated with the National Board of Education in organizing "Finland Towards an Information Society" in-service courses (5 credits). It has also organized 10-credit Media Education courses for teachers who want to take a university-level degree (15 credits; approbatur) in media education.

Alongside and in addition to the activities of the Media Education Center, the Department of Teacher Education has a long, active, and international tradition of and reputation for developing various forms and modes of telematics, modern information and communication technologies (MICT), computer-mediated human communication (CMHC), video-mediated human communication (VMHC), CAL (Computer-Assisted Learning), and distance education at varying levels of the Finnish school system. This expertise concerns both methods and media collected from extensive teaching and research done in various sections of the Department.



MEDIA EDUCATION CENTRE

- Research
- Degree Courses
- Doctoral Studies
- In-service Courses
- Projects
- Publications
- Consultancy
- Personnel



Degree Courses

The Media Education Centre organises the following degree courses during the academic year 1999-2000:

▼ **15-credit course in Media Education**
(approbatur)

▼ **35-credit course in Media Education (cum laude)**

NB. One Finnish credit or "studyweek" corresponds to 1.5 European Credits (ECTS).

[Research] [Degree Courses] [Doctoral Studies] [In-service Courses] [Projects] [Publications]
[Consultancy] [Personnel]

Educational Technology Center for ICT

Based on the experience and network of above described facilities, University of Helsinki has recently set up the Educational Technology Center for ICT. It is still a half-year-old and its research and development unit of five staff members is busy to launch new pedagogical support systems within the university. Together with the technological support system of the IT Support Center, Educational Technology Center ICT envisages maximizing improvement effort in ICT skills development as well as collaborative skills in teaching methods in forthcoming mobile learning environment.

Currently, the center plans to start joint research with Nokia to develop optimal educational software in advanced flexible learning. The center prepares the base for pedagogical development before establishment of the Finnish Virtual University in 2004. Research and Development unit plays a coordinating role, in collaboration with interested teachers and support experts, to develop various training programs including WebCT skills, which is their main platform.

Useful Links

Media Education Center <http://www.edu.helsinki.fi/media/general.html>

Palmenia Center for Research and Continuing Education

<http://www.palmenia.helsinki.fi/english/>

Open University in Finland <http://www.avoinyliopisto.fi/english/>

Apaja Center <http://www.apaja.helsinki.fi/>

Discussion

It is obvious that the twelve institutions described above have chosen different courses of “virtual university” development. To briefly summarize, these institutions can be clustered as follows. Note that the Finnish Virtual University (FVU) is not directly described in the previous section, due to its yet unclear shape at this stage.

- Traditional universities with ICT support functions (BUTE, Lund U, U of Helsinki)
- Continuing Education divisions in traditional universities (KTH Online, HUT Dipoli)
- International collaborations in research and education (VIRTUE)
- Aggregators on a B2B model of distribution (NTU, ITESM)
- Traditional distance teaching institutes (Athabasca U, CNED)
- Nationwide consortia of traditional institutions and businesses (FVU)
- Application Service Providers and Large-scale network organizations (eCollege.com, EDEN)

Observation of different forms of development suggests that three perspectives need be taken into account for understanding diversity of “virtual university” attempts; social background, support systems, and learning models.

1. Social Background

Telecommunications infrastructure varies from country to country. Even in one country, there may be a huge digital divide between the metropolis and local municipalities. The general driving force to IT society would be more involvement of industry and commerce in ICT (e-commerce). The U.S. and North Europe, in view of this, have achieved a fairly large coverage of digital networking, in which higher education institutions are also embedded.

In contrast, Central Europe (except Austria) seems to be still left out in computerization, and even a fairly active provider like BUTE has developed no more than a few online courses. By way of international networks, such as EDEN, knowledge transfer has been rapidly facilitated for closing the gap. EDEN, furthermore, develops and disseminates various ODL methodologies across Europe in close collaboration with existing distance teaching institutions. Collaborative network of this kind bases experimental formation of different kinds of “virtual university”, which may eventually be integrated into a full-fledged large scale operation.

In North America and North Europe, higher education institutions have had a substantial experience of continuing education, especially in technology and business education, thus

making the current IT revolution more permeable into their operation. NTU, ITESM, KTH Online and HUT Dipoli are some of the examples that, based on their past experience and evaluative feedback from client businesses, aim at providing more Web-based flexible learning opportunities for vocational training.

This, however, does not mean the limited need of “virtual” education. Several countries face the social circumstances that may necessitate the development of online education of some sort. The U.S, for example, expects an unprecedented surge of student population. Sweden also suffers the shortage of faculty staff. Although materials production for the Web costs far from negligible, it does offer a reasonable solution for campus capacity and labor burden, as long as the students are skilled and wired enough for online education.

2. Support Systems

The “virtual university” requires a designated division for instructional support regarding both technological and pedagogical aspects. Most conventional universities that were surveyed this time, not to mention traditional distance teaching institutions like Athabasca U and CNED, have organized more than one divisions in response to support needs. For one advanced example, Sweden’s Lund U has developed several electronic tools to support online education, one of which called LUVIT even went out to commercial market, very much like WebCT was commercialized as a spin-off from the University of British Columbia, Canada.

Be it delivered through satellite and/or the Internet, instructors have to go through a laborious process of instructional design, materials development, learning facilitation, evaluation and feedback, just to roughly overview. It goes without saying that the experience of conventional teaching helps only a small portion of the whole process, so does the function of traditional computer centers and libraries. Support systems for the new type of delivery are the necessary investment, so that instructors and course developers can form a team to jointly produce the materials and execute the teaching.

VIRTUE is worth mentioning in this context. It is not a single institute that coordinates support functions, but it is a good example of collaborative course development and teaching practice. This project started as a natural development of an international research and education on marine environment, especially that of the North Atlantic, commonly concerning partner countries; US, Sweden and Norway. Its secretariat is located in the US, but executive responsibilities in research and education are almost equally shared by each of the three institutions. Collaboration in the focalized discipline, small as the size may be, seems to be able to reduce much of inter-institutional conflict.

Recently, ASPs (Application Service Providers) have been flourishing in IT businesses, and such services are also gaining popularity in higher education. They are a new possibility for colleges and universities to outsource the total development of online education. eCollege.com, for example, can create and deliver a complete online campus, including training of faculty and administration, typically in sixty business days. In terms of staffing, physical space, and necessary maintenance of credible servers and networks, outsourcing may be a more efficient option for conventional institutions.

3. Learning Models

Course design presupposes specific models of learning. Online education particularly features open and flexible delivery so that learners can determine their own pace of study. Lund Virtual University (LVU) explicitly compares this, as the key concept of their endeavor, to a personal shopper model of teaching. Athabasca U offers two different designs, individual-paced and group-paced, for learners to choose, backed by well-established learner support services. U of Helsinki heads for an even more flexible system in the advanced mobile environment.

Flexible delivery, however, does not suffice in itself unless the objectives and notions of learning for respective courses are fully taken into consideration. Computer-mediated communication (CMC) plays a vital role in conveying directions, both explicit and implicit, for different types of learning. ITESM, for example, distinguishes the professor-centered transmission model, the student-centered investigation model, and the group-centered collaboration model. They would correspond to different types of Internet communication: the transmission model will require well-compiled online resources and BBS; the investigation model will necessitate more personal attention through email, IM and teleconferencing; and, the collaboration model will also utilize various groupware including asynchronous and synchronous modes of multimedia conferencing.

Of course, these three models are not mutually exclusive. Course design and moderation reflect various degrees of mixture, depending on the discipline, course level, teacher preference, student interest, and even the educational culture (it's been said that the Continental notion of learning is more transmissive, whereas the UK, Northern European and North American notions are more constructivist, thus more interactive and collaborative).

Learners of many online courses have been reported to outscore on-campus students in achievement. Such results may be chiefly attributed to successful CMC, especially its provision of personal attention and support, aside from more mature dedication on learners'

side.

This said, however, CMC does not guarantee high achievement by itself. Implied in case descriptions of KTH Online and Athabasca U is the importance of “off-line” meetings and study groups, as well as that of well-organized study package (study guide, text, video, CD-ROM, etc.). In other words, these “off-line” learning opportunities seem to encourage active participation in CMC, which then will make study occasions off the keyboard, more attractive.

Indeed, corporeality to be experienced in actual interaction with instructors and other learners, could do more than heighten the sense of learning community. Such occasions would help learners to acquire specific orientations toward academic exploration and practical application, which otherwise would be rare to appear in organized words. Furthermore, even informal conversation might lead to awareness of unexpected misunderstandings or unnoticed significance of course contents. It might possibly offer an opportunity to form an online study peer or to directly work on the modification of instructional process. Instructors, too, can benefit from such occasions to receive feedback and to improve effectiveness of CMC moderation.

To truly achieve flexible delivery of higher education, optimal combination should be sought after, either online or off-line, print or electronic, based on examination of different learning models.

Over in Japan, dozens of experimental attempts of online education have sprouted. Responding to the global ICT permeation, its Ministry of Education is now ready to accredit “virtual” delivery of higher education. Hopefully it should accompany a parallel revolution in the development of infrastructure, support systems, and learning models. Pedagogical aspects of “virtual university” formation are to be more in focus to promote effective utilization of new technologies.

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