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EDITORIAL

Celebrating the editor's return to Oslo, Norway, this issue of DEOSNEWS presents distance education in Norway. Since I am leaving Penn State University, Kenneth W. Borland (KWB107@PSUVM.PSU.EDU) has taken over the responsibility of DEOS-L. I will, for the time being, continue as the editor of DEOSNEWS till the end of the year and I look forward to collaborating with Ken on both DEOS-L and DEOSNEWS in the months to come. My new e-mail address in Norway is Morten@NKI.NO.

Distance Education in Norway

by

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Introduction

Norway is a highly developed welfare state based on an egalitarian society with a high standard of living. A population of 4.2 mill. Norwegians live scattered, mostly along the coast, in a large country with widespread forests and rugged mountains. The coastline has countless islands, deeply indented fjords, and stretches for thousands of kilometers. Around the country, there are four universities and about two hundred, predominantly public, colleges. As in other welfare states, public schools, colleges, and universities do not charge tuition fees. This article describes how distance education has developed and thrived in such an environment.

The first Norwegian distance education institution was established in 1914. Later, Norway was the first country to regulate correspondence education by an act of Parliament in 1948. Since then, distance education has been recognized as an important part of the educational system. It is predominantly organized by private, state approved institutions that in several ways are supported by the government in collaboration with the public school system. Most distance education students receive government grants to cover parts of the course fees. Since the 1970's, distance education has been incorporated in the increasing governmental support of adult education and life-long learning. The distance education scene today is characterized by a large variety of programs, media and technology applications, research activities, and both competing and collaborating organizations. An overview of the development in accredited schools, courses, and enrollments is compiled by Lieungh (1991, 52) and presented in table 1. Lieungh explains the considerable variations in enrollment with changes in state subsidies.

Table 1. Development of distance education in Norway

Year	# accredited schools	# courses	# enrollments
1970	32	1,093	163,024
1979	42	1,300	207,000
1989	23	850	153,000

One may describe Norway as a showcase for successful distance education, but it is also a country with a higher education organizational structure that has counteracted the development of an efficient distance education system. For example, a 1977 German doctoral thesis, comparing private distance education in 16 countries, showed that Norway had the highest number of distance students per 100,000 inhabitants; 2.5 times more than second ranked Japan (Karow 1977). At the same time, public distance education in Norway was virtually non-existent. The primary reason for this unusual condition is that the Norwegian government, at least since 1945, has supported non-governmental distance education as an important means to secure equal educational opportunities. But, in public education the government has given priority to the establishment of public schools and colleges virtually all around the country.

Distance Education History

Ernst G. Mortensen established NKS (Norsk Korrespondanseskole) in 1914 as the first distance education institution in Norway. His work was influenced by visits to the USA and to Hermods in Sweden. Before World War II, several other correspondence schools were established. During the war, public schools were closed and teachers arrested. Hence, enrollment in existing correspondence schools multiplied and more than sixty additional correspondence initiatives were registered (Oestlyngen 1947). When the Norwegian government planned the reconstruction of the post-war school system, the coordinating committee for schools and education proposed to establish a public correspondence school encompassing all levels of education. This proposed "State Correspondence School" was supposed to develop courses and apply appropriate media dependent on the development of technology in the future. But, this idea was never realised. The planning process, however, resulted in the 1948 Act on Correspondence Education. According to the authors' knowledge, the Norwegian 1948 act was for about 25 years the only law in the world regulating distance education. According to the law, the Correspondence Schools Council was established as an executive office to support the Ministry of Education in the regulation and accreditation of distance education schools and courses.

The Council contributed to the general perception that Norway has a high quality distance education system and to the fact that distance education is considered as an important part of the total educational system. This situation is also due to the country's vast distances and sparsely populated areas and to the predominant social ideology that supports educational opportunities for all adults. In 1975, the Parliament decided to provide financial aid to correspondence students and presently, all students enrolled in courses accredited by the Correspondence Schools Council receive substantial financial support.

The idea of public organized distance education was never abandoned. During the 60's and 70's, new initiatives were introduced to establish a strong public institution for distance education, but contrary to many other countries, Norway decided not to establish a national open university, maintaining that there was neither an economical reason to support it nor a population base to justify it. Instead, the efforts resulted in the

establishment of the Norwegian State Institution for Distance Education (NFU). It uses a "networking model" to promote distance education by initiating and coordinating the development and distribution of distance education programs in collaboration with the National Broadcasting Corporation, publishers, the National Film Board, private distance education institutions and agencies, and the public school and university system.

Historically, Norwegian distance education has been dominated by private institutions, concentrating on the secondary level. The activities have been morally and financially supported by the government. There are many examples of projects where organizations have cooperated successfully. For instance, correspondence schools have cooperated with public universities and colleges to provide post secondary courses throughout the country. In other cases, correspondence schools have cooperated with the National Broadcasting Corporation to supplement correspondence courses with radio and television programs. In most of these projects, and in many other correspondence courses, distance education institutions cooperate with local study organizations to arrange supplementary, local face-to-face classes. This model, based on collaboration between national providers of distance education courses and local study organizations that organize additional face-to-face classes, is termed "combined education".

Organizations

Norway has numerous organizations devoted to distance education. In fact, one may question whether a small country can justify having so many small, independent distance education organizations. Some claim that the country would benefit from having fewer, but larger, organizations. This statement is supported by the fact that several of the smaller correspondence schools struggle to survive in an increasingly competitive environment.

To date, 80% of the market has been dominated by two private institutions; NKI (the Norwegian Knowledge Institute) and NKS (the Ernst G. Mortensen Foundation). NKS has 70,000 course enrollments a year that cover educational levels from secondary school to university degree programs. NKI has 45,000 course enrollments a year with an emphasis on technical, vocational, and administrative courses. The two institutions were originally correspondence schools, but they have gradually developed into modern distance education institutions--using a variety of media.

The Norwegian government has shown a keen interest in distance education and it has initiated and funded several organizations, such as the Norwegian State Institution for Distance Education (NFU), the Norwegian Executive Board for Distance Education at University and College Level (SOFF), and the permanent Secretariat of the International Council for Distance Education (ICDE). The government also supports distance education indirectly through the state owned Norwegian Telecom (Televerket) and the public Norwegian Broadcasting Corporation (NRK).

The Norwegian State Institution for Distance Education (the Norwegian acronym is NFU) was established by an act of Parliament in 1977 (Bakken 1991, 20). It is a small organization, employing about ten people. In 1991, it had initiated about twenty multi-media projects. Among these is a project about distance education that is intended to stimulate corporations and educational institutions to apply distance education methods (Rekkedal et al. 1991).

The Norwegian Executive Board for Distance Education at University and College Level (SOFF is the Norwegian acronym), was established in 1990. SOFF does not offer distance education; it is a national coordinating body established at the University of Tromsøe. The organization registers existing and planned activities in distance education in universities and colleges, guides institutions and students, coordinates activities and

stimulates cooperation between different organizations, suggests new development projects, grants state funds to specific projects, and evaluates the activities. SOFF also gives the Ministry recommendations for allotting grants to a limited number of projects. In its Summary of Distance Education Projects at University and College Level (SOFF n.d.), the board identifies 25 projects that have received grants from SOFF in the period from 1989 to 1991. The projects are listed in appendix 2.

To stimulate the development of distance education, both in Norway and internationally, the Norwegian government, in 1988, funded the establishment and operation of the permanent Secretariat of the International Council for Distance Education (ICDE). Since then, the Norwegian government has partially financed the operation of the Secretariat. ICDE is a coordinating body for international distance education and it is affiliated to UNESCO as a Non-Governmental organization. The Council has members in more than sixty countries. Among its members are the leading distance teaching institutions in the world and national and regional associations and networks for distance education. ICDE cooperates closely with, and has arrangements of joint memberships with several regional and national associations. ICDE was founded in 1938 and in August 1988 the Council established its permanent secretariat in Oslo, Norway.

The state owned Norwegian TeleCom has identified distance education as one of its priority areas of support, and has sponsored many research projects where telecommunication has played a major role.

The public Norwegian Broadcasting Corporation (NRK) started radio broadcasting of educational programs before World War II (Pettersen 1991). Today, it provides daily programs with an emphasis on language and high school courses. NRK started broadcasting of educational television programs in 1962 and educational television has been an important part of NRK's mission ever since.

The Norwegian Association for Distance Education (NADE) was established in 1968 as an association of recognized correspondence schools. It was reorganized in 1984, when membership was opened to universities and public colleges. It is now an association of 19 institutions offering distance education. Among the NADE members are: NKS, NKI, the University of Oslo, the University of Tromsø, the Norwegian School of Management (BI), Finnmark Research Center, and the Norwegian Executive Board for Distance Education at University and College Level (SOFF). NADE takes an active part in cooperative activities both at the European and the international level.

NKI, NKS, and The Norwegian State Institution for Distance Education established The Norwegian Centre for Distance Education (SEFU is the Norwegian acronym) in 1988. SEFU initiates, organizes, and coordinates several research and development programs concerning distance education and new technology.

Media, Methods, and Technology

The schools apply a large variety of media, some on an experimental basis others as a standard part of their programs. In some cases the application of media/methods may be provided by a cooperating organization, or a third party contractor. The most common media are:

- Print and land-mail communication for correspondence courses;
- Telephone for teletutoring and audio conferencing;
- Audio tapes for presentations, exercises, and two-way communications;
- Video tapes for presentations;
- Television for broadcasting or distribution by satellite or cable;

- Radio for local and national broadcasting;
- Video conferencing using 64 kbit video phone or 2 mbit compressed video;
- Computer-mediated communication;
- Local face-to-face classes, week-end seminars, etc; and
- Local study groups.

NKI and NKS have led the exploration of new opportunities and innovative technologies in distance education, particularly with regard to two-way communication. The two organizations have extensive, specialized administrative computer systems and advanced use of computer-mediated communication systems. NKI started the EKKO project in 1986 to develop a computer conferencing system for distance education. Today, the NKI Electronic College offers a complete Information Processing Program via computer conferencing (Paulsen & Rekkedal 1990), while NKS offers a Business Administration Program (Soeby 1990) where PortaCOM, the computer conferencing system at the University of Oslo, plays a major role. Further, NKI and NKS piloted the use of cable television, telephone support activities (Rekkedal 1989), and, in collaboration with the Norwegian Telecom, audio and two-way video conferencing as well as experiments with video graphics (Rekkedal and Vigander 1990) and video telephones.

Secondary Education

The non-governmental distance education institutions have a long tradition of offering secondary level courses in general education and vocational subjects. Open Secondary is a project that was launched by NKS and The Norwegian Broadcasting Corporation in September 1991. It introduces extensive television support to correspondence students preparing for secondary school exams. It should also be mentioned that local high schools have entered the field of distance education, partly by cooperating with distance education institutions to be able to offer courses where they lack local expertise, and partly by offering courses to adults in their geographical area.

Post Secondary Education

At the tertiary level the private institutions may offer programs accredited by the university system or cooperate with other tertiary institutions that organize exams and issue certificates. Until recently, distance education has been neglected in public institutions, but now, universities and colleges exhibit keen interest in the possibilities of offering their courses in non-traditional ways. This interest is partly caused by moderate pressure from governmental committee reports and other initiatives of support from the Ministry. This has happened during a period characterized by a decrease in applications and by new opportunities in communication media and technology. Recently, increasing unemployment seems to have resulted in a surge of applications to universities and colleges. Several institutions now consider distance education as a way to enroll more students in spite of the congested campuses.

During the last few years, the Ministry of Education has taken action to stimulate the development of distance education within the college and university sector (St.meld. 43, 1988-89, NOU:28, 1988). The Ministry has appointed the four universities and three community college centers as nodes in a distance education network. At the same time, the Norwegian Executive Board for Distance Education (SOFF) was established. SOFF has later identified the following challenges for distance education in Norway (Grepperud and Stenersen 1992):

- Higher educational institutions and their professional staff need to be motivated for this type of activity
- Quality through collaboration
- The development of a supportive tutor system
- The need for an educational adapted technology
- Laws, regulations, and general study conditions
- Adaption to an international perspective

Program and student characteristics. Most programs are of a modular structure and multi-functional, i.e. undergraduate programs are also used as continuing education programs. The modules are usually offered as single courses and not as complete degree programs. Several areas of study are covered, such as management and business studies, marketing, law, languages, history, mathematics, computer science, engineering, environment protection--and a range of shorter continuing education courses. The University of Tromsø also offers some post-graduate programs such as History and Nordic Studies. Most students are 25-40 years old, employed, part-time students. Statistical data are scarce, but the number of programs and students is increasing. The number of students is probably 5,000-10,000.

Requirements, study load, and cost. In most programs, university entrance qualifications are required as in traditional university studies. However, some programs are more open, and the institutions can offer exemptions from entry qualifications on an individual basis. Enrollment is usually offered once or twice a year, but some programs offer continuous enrollment. Post secondary programs use credit points. 20 credit points correspond to one year of full-time study. In distance education programs, the study load is normally 10 credit points a year. A national body accredits study programs for inclusion in a national degree system where credits may be transferred from one institution to another. Most distance education programs are financed by course fees payed by students, covering the greater part of the costs. State support and subsidies from the institutions' budgets may vary, but usually will cover only a minor part of total costs.

Course development and production. Course development and production processes vary between institutions. Some employ standard textbooks and little additional course material while others develop extensive multimedia materials specifically designed for distance education. Such self study materials are designed by faculty members or by contracted course designers. In these institutions, designers may have support from in-house editors, instructional designers, and production specialists. In some programs, several institutions (consortium institutions and others) have organized collaborative course development and production.

Course delivery and student support. A standard course package comprises printed material in the form of textbooks, study guides and notes, or specially prepared self study material. In some programs, additional course material may include television and radio programs, audio and video cassettes, and computer applications and courseware. The degree of interactivity varies between institutions and programs. The most common form of interaction is correspondence--sometimes in combination with face-to-face classes, telephone support, and audio conferencing. Video conferencing and computer mediated communication are still uncommon means of communication, even though these technologies are gaining in popularity. Student support is based on telephone and face-to-face counselling, local classes or short seminars organized at a central location. Local support is often organized by cooperation with local school authorities or voluntary study organizations. Assessment is based on the correction of written compulsory assignments and on written examinations of course modules and/or complete programs. Grades are normally based on written examinations--often

the same as in public schools.

The NKI College of Engineering has offered engineering programs, partly at a distance, for 25 years, but most of the other programs have been developed during the last five or ten years. Wilhelmsen (1991) gives an interesting overview of these post secondary projects. Among these projects are:

The NKI College of Computer Science, offering a program in Information Processing.

The NKS College, offering degree programs in Business Administration and in Marketing.

The University in Bergen has offered a local history program via cable television and local radio programs that are followed by discussion and questions via telephone.

The University in Oslo, conducting exams in Family Law based on correspondence courses from NKS, radio and television programs broadcast by the Norwegian Broadcasting Corporation, and local face-to-face classes.

The University of Tromsøe, offering a history course where compressed video conferences, provided to students at four sites, is an important part of the course.

Conclusion

Norway has, in several ways, been a pioneer in distance education. The country has a comprehensive distance education system that is acknowledged for its innovative use of methods and technologies. One may also say that the 1948 Act on Correspondence Education, the "Networking Model" applied by NFU, and the "Combined Education Model" are models that have gained international interest. Further, Norway has contributed to international distance education through the funding of the permanent ICDE secretariat and as the host of major international conferences such as the 14th ICDE World Conference and TeleTeaching 93. In the future, traditional distance education organizations face new challenges as a result of increased competition from international providers and public universities and colleges. These new competitors are, generally, resourceful organizations that apply new technologies for two-way communication and conferencing, and place less emphasis on traditional, preproduced distance education material.

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Appendix 1. List of Addresses

ICDE - the International Council for Distance Education
The ICDE Permanent Secretariat
Gjerdrumsvei 12
N-0486 Oslo 4
Telephone: +47-2-950630
Fax: +47-2-950719

NADE - Norwegian Association for Distance Education
Gjerdrumsvei 12
N - 0486 Oslo 4
Telephone: +47-2-950630
Fax: +47-2-950719
Telex: 72400 fotex n - att. NADE, Oslo
Contact person: Executive Director Reidar Roll

NFU - The Norwegian State Institution for Distance Education.
box 8197 Dep.
N-0167 Oslo 1
Telephone: +47-2-564310
Fax: +47-2-564311
Contact person: Director Alf Bakken

NKI

Hans Burums vei 30
 Postboks 111, 1341 Bekkestua
 Telephone: +47-2-122950
 Fax: +47-2-530500

NKS

Postboks 5853 Hegdehaugen
 N-0308 Oslo 3
 Telephone: +47-2-568500
 Fax: +47-2-568537

SEFU - Norwegian Centre for Distance Education

Gjerdrumsvei 12
 N - 0486 Oslo 4
 Telephone: +47-2-950630
 Fax: +47-2-950719
 Contact person: Managing Director of NKS Erling Ljosaa
 (Telephone: +47-2-56-85-00)

SOFF - The Norwegian Executive Board for Distance Education at University and College Level

Norut Group
 N-9005 Tromsø
 Telephone: +47-8-380300
 Fax +47-8-312520
 Contact person: Executive Officer Gunnar Grepperud

Appendix 2. Distance Education Projects at University and College Level that Have Received Grants from SOFF

The University of Bergen

Norwegian History

Tilfellet Tellus (Environmental studies)

Preparatory Project for Distance Education in Norwegian as a Minor Subject

Interactive Video for Norwegian as a Second Language

The University of Trondheim - AVH

Ten-credit Distance Education Course in English

Distance Education in Mathematics using Electronic Communication

Distance Education in Biotechnology at University and College Level

The University of Trondheim - NTH

Preliminary Project to Develop a Nation-wide Service for Distance Education in Engineering Subjects

Production of EuroPACE courses

The University of Oslo

Environmental Management - 10 credit Distance Education Course (in cooperation with NKS)

Law - Computer-based Teaching

Distance Education in General Chemistry at University Level (5 credits)

Stavanger College of Nursing and the University of Oslo
Master Degree in Nursing Transmitted by Satellite - Health Profession Education

Norwegian Lutheran Hospital and College/Norwegian College of Public Administration and Social Work
Part-time Distance Education in Social Work

North Norwegian Conservatory of Music
Computer-based Distance Education in Music

Oppland College
Kongsvinger Project

Telemark Research Foundation/Telemark College of Education/The University of Oslo
Mathematics Education for Teachers-Distance Education with the Aid of Micro Computers and Telecommunication

The University of Oslo, Institute for Special Education/Bodoe College of Education/Sogndal College of Education/Norwegian College of Education for Teachers of Vocational Subjects
Developing a Distance Education Study Program in Practically-applied Special Education for Teachers in Upper Secondary Level Schools-A National Cooperative Project

Rogaland College/Stavanger College of Education
Distance Education and Information Technology as an Implement for the study of Dyslexia

Stord College of Education
Educational Information Science

NKS Distance Education College
Computer Mediated Communication in Distance Education. Course Development and Analysis within the Field of Computer Mediated Communications and Computer Conferencing Systems

Tromsøe College of Education
Norwegian Process Writing in Teaching Practice. Computer-based Communication as a tool in Counselling Education for Teachers

Nordland College
Export-Collaborator School for Fisheries and the Fish Farming Industry

Sagene College of Education
A Half-year Distance Education Course in Development Studies and Global Understanding

Finmark Regional College
"Focus on the Firm"-a course in economical analysis and planning for

small and medium-sized businesses

Norwegian College of Public Administration and Social Work
Decentralized College Education in Economy and Administration for
Municipal Employees

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