BACKGROUND

Twenty-five million Canadians share the world's second-largest country in area. Although most of them live in cities along the southern border of Canada, it is a natural territory for distance education.

Under Canada's constitution, education is within the jurisdiction of the governments of the ten provinces. Although a major proportion of the financial support for higher education comes from the federal source, Canada has no equivalent to the U.S. National Institute of Education. The Education support branch of the Department of the Secretary of State, which advises the central government on the distribution of funds to the provinces and on national issues in education, is the only official federal presence.

Conversely, radio and television in Canada are under federal jurisdiction, although there has been a protracted legal battle over whether cable and pay-TV should be regulated federally or provincially. Several provinces operate educational broadcasting or cable networks under license from the federal regulatory body, the Canadian Radio-Television Commission (CRTC).

Just as in the U.S.A., Canada's federal structure has prevented the emergence of any national open university. Although the occasional academic statesman will remind us of the meaning of the word university, in fact universities in Canada exist first and foremost to serve the province in which they are established. It is thus practically impossible for any single university to have access to media with national coverage.

Nevertheless, university distance education has developed in Canada, even if on a mainly intra-provincial and occasionally regional basis. Five kinds of development can be identified: the correspondence programs; the open universities; the "outport" programs; the "extension" programs; and the network.

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CORRESPONDENCE COURSES

Some Canadian universities have offered correspondence courses for many years, a notable example being Queen's University (Ontario) where a correspondence program established in 1889 predates any other such development in Canada. The University of Manitoba offers a correspondence alternative which has special links with the Canadian armed forces. Others include Acadia University (Nova Scotia) and Mt. Allison University (New Brunswick) and the Universities of Montreal (Quebec), Ottawa (Ontario), Western Ontario, Saskatchewan and British Columbia. However, the largest program is now offered by the University of Waterloo. It made the decision to develop a strong correspondence program based on the delivery of regular program courses through audio-tape and instructional notes. Although not an "open" program, since students must meet normal admission requirements and are placed on the regular school term, the Waterloo program enrols thousands of students all across Canada.

OPEN UNIVERSITIES

Canada has two institutions inspired more or less directly by the British Open University although each arrived at this destiny in a serendipitous manner. The University of Quebec (Canada's only province-wide multi-campus university) was created in 1968. By 1972 its founding president, anxious that the network and its campuses were already showing signs of senility in their teaching methods, created the Téléc-université as a stimulus to innovation and a pedagogical resource for the network. Not surprisingly the campuses responded with an informal boycott of the new unit so the Téléc-université began offering open university type courses (i.e. team-produced multi-media packages) in a quasi-autonomous manner. This venture was very successful and an enrolment of 30,000 (about half made up of teachers) was reached in five years. Although this success has not endeared the Téléc-université to the University of Quebec's conventional campuses, years of battling have produced a modus vivendi which includes some joint ventures.

Athabasca University was established as an open university when the Government of Alberta halted the campus development for a fourth conventional university in response to the early 1970's recession in enrolment growth rates of the previous decade. From its pilot project beginnings, the University is emerging as a substantial member of the Alberta system offering degree programs in Arts, Sciences and Administrative Studies to a current enrolment of more than 10,000 part-time students, increasing annually at 20 percent rates. The Athabasca model involves the development and production of high quality team-produced packages, print-based with supplementary audio-tape and other medium materials where appropriate. Delivery support includes an extensive telephone tutorial network, teleconferencing, and video transmission through community cable television facilities. Student services (counselling, advisement, registration, access to computer facilities, etc.) are provided through regional centers. Athabasca University is engaged in a number of joint ventures with other Alberta postsecondary insti-
tutions and is a member of each of the regional Adult Education Consortia recently established by the Government of Alberta.

British Columbia's Open Learning Institute (O.L.I.) was established in 1978 to provide postsecondary and adult distance education opportunities in Canada's most western province. Although not a university in constitution, the O.L.I. has degree granting authority and provides degree-credit courses in Arts, Science, Business Administration and Education in addition to its substantial offerings in adult basic education, career-technical-vocational areas and continuing education. Some elements of the Institute's university credit program have been developed in cooperation with Athabasca University and the institutions exchange courses in a number of subjects. The Open Learning Institute provides tutorial services to distance learners and has a network of regional centres. In 1982-83 there were some 4,000 plus course enrolments in degree credit courses among a total registration of over 12,800.

SERVING THE OUTPORTS

The beginning of multi-media distance education in Canada is usually traced back to a program initiated by Memorial University of Newfoundland in the late 1960's. Video-taped lectures were used to reach groups of students in the outports that dot the coasts of Newfoundland and Labrador. The courses offered served mostly teachers and the effort played an important role in teacher upgrading. A similar program which includes teleconferencing and the use of broadcast and cable T.V. is currently offered although the proportion of teachers in the student body is much reduced. Memorial University began to air information and educational programming in the St. John's region through its own television channel in 1978. The service was suspended in 1981 because of budget cuts but has since been resumed with hopes that it can be expanded throughout the province.

North Island College serves the west coast of British Columbia and northern Vancouver Island communities. Although not a University, N.I.C. offers an extensive university transfer program in the distance education mode to full and part-time students through a cooperative arrangement with Athabasca University. Course materials packages are provided by the University; tutorial services and local delivery support, by the College. The University provides evaluation and accreditation to co-registered students. In the last 5 years some 10,000 students have enrolled in these cooperative undergraduate programs in Arts, Science and Administrative Studies.

EXTENDING OPPORTUNITY

All of Canada's universities provide opportunity for part-time study. Most have extended day and evening credit programs. Many provide courses off-campus using the conventional delivery modes. A few currently use one or more of the electronic media and/or techniques which enable students to participate at times and places of their choosing, and more have plans to do so.
In Ontario, Carleton and Wilfrid Laurier Universities offer selected courses using the television medium; the Universities of Western Ontario and Ottawa take a multi-media approach; the University of Guelph is introducing a university-level distance education program and Laurentian University has plans to expand its northern Ontario offerings to permit degree completion in this mode. A recently completed review of distance education in Ontario Universities has recommended a strategy for coordination which promotes inter-institutional collaboration and cost-sharing, and voluntary coordination of activities, to avoid unwarranted duplication of effort.

In the West, there has been sufficient interest and activity in distance education on the part of conventional universities to prompt the Committee of Western Canadian University Presidents to establish a standing committee on university distance education. The Committee’s primary functions are to facilitate and encourage information sharing, sale and exchange of course materials, collaborative planning and program development, transfer of credits and exchange of staff.

**NETWORKS**

Hard on the heels of the Open Learning Institute, the Province of British Columbia has established the Knowledge Network of the West (KNOW). Although at first sight a satellite-delivered educational channel, KNOW’s originators see it as a radically innovative concept which brings all the adult education resources of the province together in a synergistic manner.

Other provinces have organizations with mandates and/or capabilities for the delivery of educational programming through television, radio and/or other networks and for the production of video and audio programs and related materials. TVOntario (The Ontario Educational Communications Authority) operates a broadcast television channel which reaches all areas of the province and a repeat programming cable channel in the larger urban areas. SASKMEDIA (Saskatchewan) and ACCESS (The Alberta Educational Communications Corporation) provide similar production and distribution facilities and expertise in their respective provinces. Although the majority of programming produced and/or distributed by these organizations is for one or more institutions in the system, each is developing an increasing capability to develop programs independent of sponsoring institutions and current mandates are sufficiently broad to permit their independent involvement in university-level distance education programming.

**SUMMARY AND CONCLUSION**

To sum up the Canadian experience:

1. Correspondence Courses. This time-tested approach for extending educational opportunity continues to hold its own despite its detractors and without question remains the delivery mechanism responsible for serving by far the largest number of Canadians studying at a distance;
2. Open Universities. Although Athabasca University, the Open Learning Institute, and the Tele-universite must each be considered successful innovations in higher education in Canada, their ability to extend educational opportunity to new client groups has yet to be demonstrated;

3. Serving the Outports. Given Canada's geographic enormity, this subcategory of the distance education movement is perhaps most appropriate and applicable in this country. Certainly the use of teleconferencing and cable T.V. is just really coming into its own and has yet to be fully exploited;

4. Extending Opportunity. Although we have been conservative if not pessimistic about the success of distance education in reaching new client groups, recent developments in the more heavily populated province of Ontario suggest that this province may be on the verge of a major breakthrough in opening up doors to significant numbers of persons who can benefit from higher education;

5. Networks. Although consortia have existed for some years in the province of Alberta and the province of Ontario has just established mechanisms for cooperative efforts, real cooperation involving the relinquishing of some modest degree of sovereignty in the interests of the greater good has yet to be demonstrated.

A paper of this length can only highlight selected developments in distance education in Canada. Nonetheless, it may be useful to conclude by listing what we have called elsewhere the lessons of a decade and then with equal brevity outline some of the issues and problems that distance educators in both countries have been forced to address; and that still defy final and universal solutions.

The first “lesson of the decade” focuses on cost and suggests that because distance education relies so heavily on communications technologies, once an optimum number of students have been enrolled in a course the marginal cost to serve additional students is quite small in comparison with traditional classroom instruction. The advantage of low operational costs must, however, be balanced against the relatively high original cost of setting-up the course and providing for its delivery to students in distant locations. A subcategory of the “lesson on costs” raises the question of economies of scale. In Canada, the population does not permit the economies that have prevailed in certain Asian countries and in Great Britain. Regrettably provincial boundaries and other political jurisdictions and jealousies have largely precluded imaginative regroupings that might at least partially solve the problem particularly with regard to the use of the more expensive technologies, including television. We thus cannot yet produce a convincing argument that educational services and opportunities delivered by the distance mode are less expensive.

With regard to management, and in comparison again with conventional institutions of higher education where management is frequently informal and collegial in nature, distance education operations usually need to be highly centralized and require a much more directive style, analogous to that needed to operate say
a high technology factory. Others have noted that the transition to this form of management will not be made easily by many educators.

Instructional design and instructional technology have been greatly concerned with the educational uses of the new communications systems while fighting an uphill battle to make any impact in the conventional university. By contrast, in distance education, these approaches have been accepted as legitimate and full partners from the outset, although this by no means implies that the relations between distance educators and instructional designers are always easy, and still less that the courses produced as a result of such cooperation are of optimum instructional quality.

An additional lesson of the decade has been the willingness of distance educators to demonstrate the flexibility of the more conventional communications techniques. A notable example is print, in which the application of computerized text processing and typesetting has had a major beneficial impact on the reduction of the costs of preparing and disseminating written information.

On the other side of the ledger, television has not had the impact anticipated by some. Few institutions have developed professionalism and consistency in the design of television programs for use in distance education courses. Production costs are high and distribution problems persist.

Similarly it must be admitted that the computer has yet to come into its own in distance education. The most universal use of the computer in this arena since the 1970's has been in institutional record-keeping and in the text processing aspects of preparing printed course materials. Use of the computer in the instructional process itself offers increasingly greater potential with the addition of better graphic capabilities in the new communications technologies. However, use of computers for the delivery of instruction in distance education is not common in Canada.

The matter of the optimum rate and pace for effective learning in the distance mode is another of the lessons of the decade. Evidence suggests that when an institution sets the pace of study, provides structure through scheduled events and deadlines and reinforces achievements on a unit by unit level, students are much more likely to succeed. However, decisions about pacing at present seem to be largely a matter of the institution's value system rather than reflecting research evidence on this important question.

The old problem of credit, credibility and transfer of credits has to be seen as an issue that has generated still unresolved problems. A succinct way to put the matter is "whose credit for what". Many of our friends in conventional education note that we are introducing a whole new world of issues over which to disagree, thereby compounding the problem created by the failure of the campus-based conventional institution — with its decades of experience in wrestling with these problems — to produce any satisfying solution.

Next, in this selected set of illustrations of the lessons learned, issues faced and problems yet to be resolved that we face in distance education is the matter of cooperation, coordination and consolidation. Too many of us hang tenaciously
onto the notion that if we didn’t make it it can’t be good enough. This raises issues of institutional autonomy and even departmental autonomy within single institutions that spill over negatively into the operation of networks. We seemingly have yet to come to grips with the basic question: Whose job is what?

Finally, as distance education systems have matured most have recognized the importance of promoting student development — that is providing opportunities for the student to develop study skills, such as goalsetting, time management, critical reading, and essay writing and revision. Communications technologies have been used successfully to teach such skills at a distance.

It makes psychological good sense to conclude by “counting our blessings”. Certainly it is fair to say that in the decade or so since the term “distance education” came into vogue via the expansion of media applications beyond print, we have come a fair distance. Throughout the world the interest in distance education is extraordinary as witnessed by the change of name of the International Council on Correspondence Education to the International Council on Distance Education at the 1983 meetings in Vancouver. We can also point to incipient co-operative efforts both within particular political jurisdictions and in somewhat hesitant ways across those jurisdictions including national boundaries e.g. this jointly sponsored meeting. There are also the beginnings of insight into the instructional/learning process that don’t start with the presumption that the ideal learning context is one knowledgeable teacher in the presence of one or more sentient and motivated learners. Finally, it can be argued with some evidence that for all of our remaining print-bound in our use of the media, some efforts have been made to take special advantage of the instructional potential of other media and not simply use them as a mechanical substitute for the professor or teacher.